

ALE-45 Exoskeleton:

Structure and Material: The exoskeleton will be constructed from a lightweight, high-tensile strength titanium-aluminum alloy. This material offers a balance between durability and weight, making it suitable for extended wear. The total weight of the exoskeleton will be approximately 35 kilograms, with a height of 6 feet to accommodate the average human height.

Power Source: The exoskeleton will be powered by compact, high-capacity lithium-ion batteries capable of providing continuous operation for up to 72 hours. These batteries can be recharged using standard electrical outlets or simply replaced.

Al-Assisted Aiming System: The exoskeleton will feature an integrated Al system that assists with aiming. This system uses image recognition algorithms and predictive modeling to determine the trajectory of a target. The system has a response time of 0.05 seconds, reducing the time between target acquisition and firing, the downside is that the Al aims from the helmet scanning logs while the average unit doesn't constantly aim directly but it could be useful.

Emergency Removal Mechanism: The exoskeleton will include a quick-release mechanism that allows the user to exit the suit in less than 20 seconds. This feature is activated by a button located on the wrist of the suit, which can be pressed in the event of an emergency. Additional Features: The exoskeleton will also include a wrist based display (HUD) that provides real-time information about the surrounding environment. The suit will also feature an integrated communication system and a cooling filtration system to not fry the users.

RN Weapons
RN Weapons (Missiles
Electronic Systems
Missiles
Air-to-air missiles
Anti Ship Missiles



Armoured Truck KVH5

1. DIMENSIONS
Overall Length, mm 6015

Overall Width, mm 2317
Overall Height, mm 2418
Wheelbase, mm 3322
Track Width, mm 1982

Ground Clearance, mm 356

2. VEHICLE LAYOUT

Body layout Body on frame Seating layout 2+3 or 2+3+2

Doors 4

Roof turret with hatch Yes

3. WEIGHTS

Curb weight, kg 10100

Payload, kg 1600

Combat weight, kg 11700

4. POWERTRAIN

Engine make Ford

Engine model Power Stroke

Engine type Turbo charged diesel V8

Displacement, I 6.7 Maximum Power, hp 330 Maximum Torque, Nm1017

Fuel type diesel

Power to Weight Ratio at combat weight, hp/ton 28.2

Transmission automatic 6-speed

Fuel Tank Capacity, I 257

5 RUNNING GEAR

Driveline selectable 4x4

Axle and suspension FR Rigid CTIS-ready axle with coil springs and hydraulic dampers

absorbers

Axle and suspension RR Rigid CTIS-ready axle with leaf springs and hydraulic dampers

absorbers

Transfer case 2 speed

CTIS / STIS Optional CTI

Brakes FR Hydraulic, Ventilated disc Brakes RR Hydarulic, Ventilated disc

6. MOBILITY

Top Speed, km/h 100 Turning Circle, m 14.6

Grade ability 60%

Static Side Slope 30% Vertical Step, mm 610

Fording, mm 900

- 2x (L.R) Gurilie detactor-locators (Thales Acusoric)
- 1x LVIIR commander's thermal sight/NIR day sight
- 1x Mirror Bushmatter (J. Andrew L. And

pansarbandyagn 252

seats 11 dismounts and 3 crewmen, i.e. the standard 14-man mechanized squad

first vehicle purpose designed for Kitten (a FELIN knockoff) from the ground up, with charging ports for each dismount and internal AN/VIC hookups between crew and the three dismount section NCOs (previously the dismount section leader just wore a armored crewman cap with a VIC hookup while mounted)

ammunition stowed is:

2x Ak21P (integrally silenced 6.5x43mm Automatic Rifle tanker SMG; stowed)

180 rnds 5.56x45mm or 6.5x43mm Automatic Rifle in 30-rnd magazines (stowed)

3x smoke grenades (hand tossed; stowed; for crew evacuation use)

2x first aid kits (front and back)

.50 caliber RWS w/ 200 rnds (ready

M202 FLASH mounted on some vehicles

300 rnds 25mm (ready: 100 SABOT, 200 HE-I)

900 rnds 25mm (stowed)

1,200 rnds MG (ready; coax)

2,400 rnds MG (ready; coax)

4x BGM-71 or Raytheon HATM (ready; launchers)

3x BGM-71 or FGM-148 (stowed)

2x FGM-172 (stowed)

4x AT-4 or

6x M72 LAW (stowed) or

1x M202 FLASH

4+1x 66mm clips

1x M60 LMG (stowed)

800x 6.5x55mm Long rnds (LMG; stowed)

1x 84mm Grq48 (stowed)

12x 84mm rnds (smoke and HE; stowed)

1x Kpist m/70 (or m/15) automatic stock (stowed; IFV gunner's use)

108 rnds 9x19mm Automatic Combat Pistol or 6.5x25mm Automatic Combat Pistol in 18-rnd magazines(stowed)

16x 66mm smoke grenades (RP; stowed)

Up to 2,400 rnds 6.5x43mm Automatic Rifle in 30-rnd magazines (stowed)

2x MAJALIS firing ports/RWS w/ 450 rnds ea. (ready)

900x rnds 6.5x55mm Long (RWS; stowed)

2x BGM-71 or HATM ea. (stowed; rear storage) or

8-32x land mines (various: stowed: rear storage) or

8x APOBS breaching charges (stowed; rear storage) or

Various demolitions charges (stowed; rear storage)

replaces pby 251 (bradley expy) from about onwards in frontline [regular] formations

turret's name is SVANTE, the laser's name is KATLA, the CITV FLIR's name is LOTTE, the APS's name is KATHERINE and it controls the ASP Trastar and ASP Mesar, the gunner's FLIR's name is LOLA, the rear machine gun turret's name is MAJALIS (yeah that's right i did it), and the Special Armor bricks and sideskirts are collectively known as LAPSE

these are all contrived acronyms (ok LAPSE isn't that contrived) honest

the Stavensreserven (Reserve Formations of the Supreme High Command) mechanized infantry formations retain the Pbv 251 until the early '40s at least

most frontline vehicles that get traded in are refurbished, factory zeroed, and cut into utility carrier versions for a variety of purposes

this neutralizes M113 and its hideous spawn

a few get sold off to the forest service department to be turned into a menagerie of firefighting or rescue vehicles for use in woodlands terrains

shock (cavalry) formations receive the HIFV version, packing the same turret, but fitted with an automatic 57mm gun and no coax, and on a tank-like chassis seating 7-9 dismounts (depending on how many jump seats i add)

the turret will eventually be fitted to the TAPV knock offs and possibly a LAV-25 in the '30s and '40s

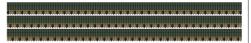
AmBO, M/81 Pangolin M.B. 1017

TCa. Domalde Armadias

213. Armadgrenadar Bataljun, 21. Brigaid, 1. Armadgardaz Divisjun 'Haumjasaz'



1x35mm Avecastres Single Feed Autocannon 300 round capacity, 35 \times 240mm mixed HE / AP belt Product of Litania



2×7.92mm Herecau MaG.M/80 Light Machine Gun 100 round belt, 7.92×57 mm belt, 1100 additional rounds stowed Product of Herecau, Mero-Curgovina



2× Ealhs Grop Armadbricar Gonganur ATGM 2 missiles carried
Product of Ananruhs, Mero-Curgovina



3×7.62mm RWFa, C.M/68 Carbine 30 round magazine, 7.62×45mm magazine, carried by crew Product of Ron, Mero-Curgovina



4x RWFa, W.M/75 Disposable Rocket Launcher Single use, distributed amongst dismounts Product of Ron, Mero-Curgovina



Additionally carried: Mapping Tools



Low Intensity First Aid



Firefighting and Low Intensity Repair Gear

Dolf 9 D-2 Driver



Entrenching and Terrain Management Gear

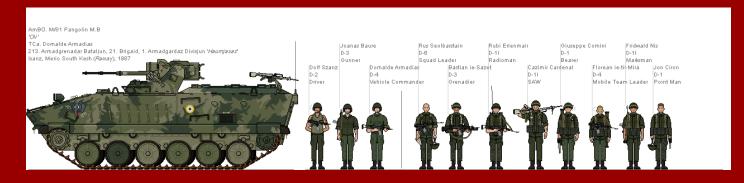


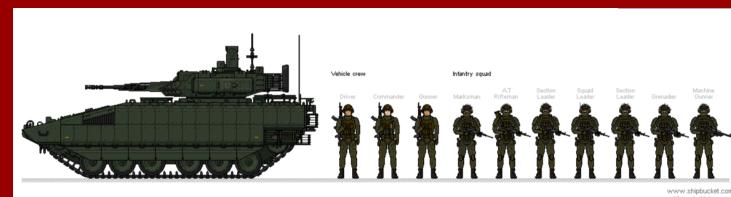
Variety Marking Smoke



Inclement Weather Tarpaulin (Asphalt Grey)







Armament

In the standard version depicted here, the AV-15E, the main armament usually consists of a 30mm autocannon with direct storage for up to 500 rounds, 300HE rounds and 200 AP rounds feed to the gun by a dual feeding system.

Mounted to the gun's immediate right is a 7.62 mm MG5 with 2,000 rounds.

The turret can also accommodate 2 multi-purpose missile pods, one on each side, which can be armed with a wide variety of weapons, since wire / infra-red guided anti-tank missiles, to fire and forget top-attack anti-tank missiles and infrared guided air-to-air missiles.

Protection

The AV-15 utilizes modest composite armor plantings, but the angle of the hull and turret armor makes the practical protection level against AP types of ammunition much higher. The turret in not as well armored, but the main autocannon is encased in an armored box capable of resisting hits of 30mm projectiles. This reduces the chances of the enemy to achieving a firepower kill on the vehicle.

Additional armor is provided by large ERA blocks in the front and sides, as well as cage armor in the rear. This increases protection against HEAT projectiles such as RPGs and anti-tank missiles

Automatic fire extinguishers, infrared tracking detection sensors, smoke launchers and reduced infrared signature in the exhaust area provide the AV-15 with a good survivability against modern threats

Mobility

The AV-15 series, in its current form utilizes a V10 diesel, 11.1 litres engine with 1,088 metric horsepower (800 kW) coupled to a seven speed transmission, giving it a good power to weight ratio in comparison with many of its contemporaries.

Sensors

The AV-15E features a fully stabilized 360° periscope (PERI) with 3rd generation thermals and six different zoom stages offering a direct glass optic link to either the commander or the gunner. The gunner optics, which can be completely protected with a slide hatch, are mounted to the left of the main gun. The gunner has a thermal vision camera and laser range finder (identical to those on the PERI). This allows for both the gunner and the commander to look for and share target information. The system also allows for the guidance of two anti-tank weapons at the same time, to different targets.

AV-15E Umbra IFV from Asalbania

Weight: 32t

1088hp diesel engine

Crew of three: Driver, Gunner and Commander

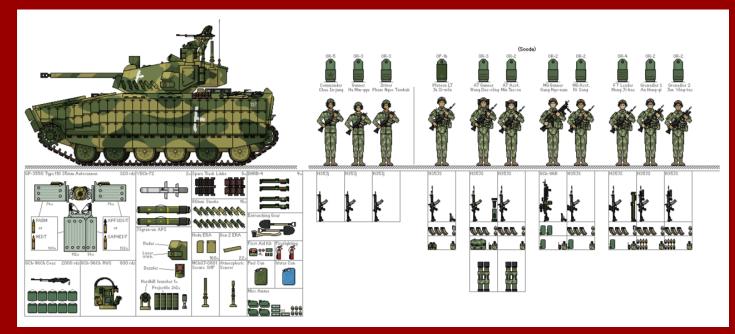
Carries 7 passengers/full infantry squad

30mm dual feed autocannon, 200 AP, 300 HE

7.62 mm MG5, 2000 rnds

Twin missile launchers, 2rnds each

Add on pantser on the hull

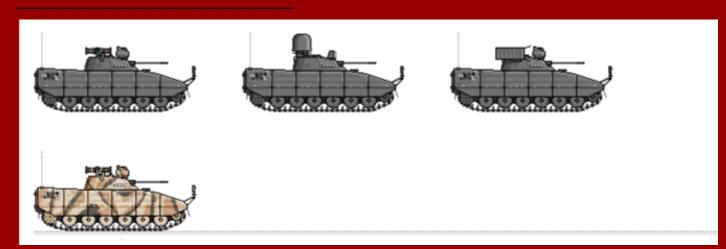


The BSCh-8 (Squad Transporting Armored Vehicle) is the main infantry fighting vehicle currently produced in Menghe. Its earliest variant, the BSCh-8G, entered service in 2010, and since then it has been produced in three major generations, each featuring a completely redesigned turret. The BSCh-8D is the newest variant, entering service in 2018. It features an all-new loading system for the 35mm autocannon, a less cramped turret, and a hardkill active protection system. Compared with the Menghean Army's previous IFVs, the BSCh-3 and BSCh-5, the BSCh-8 sacrifices amphibious capability in return for superior protection, withstanding 30mm APFSDS fire over the 60-degree frontal arc and 14.5mm fire over the 270-degree frontal arc. With the ERA kit pictured here, it can also withstand most man-portable anti-tank rocket projectiles.

The main armament of the BSCh-8D is the GP-3550 Type 110 autocannon, which has a caliber of 35mm by default but can be upgraded to a 50mm weapon by swapping out the barrel and a few other small components. This autocannon has a dual linkless feed, with 76 high-explosive rounds in the ready box on the right side and 76 anti-armor rounds in the ready box on the left. These ready boxes are fixed to the gun and elevate and depress alongside it, greatly improving reliability compared to the feeding system used on the BSCh-8N. An additional 112 high-explosive and 56 anti-armor rounds are stored in a separate linkless feed unit below the turret ring, which can automatically replenish the in-turret linkless feed boxes from below armor while the gun is fixed at a 0-degree elevation. The ready ammunition boxes and trunnion are actually located behind the heads of the turret crew, with the autocannon sitting in a deep "trench" down the middle of the turret. The 35mm APFSDS round is able to defeat all known IFV threats over the frontal arc, and the 35mm PABM (Programmable Air Burst Munition) automatically detonates at a range set by the gunner, making it effective against enemy infantry behind cover.

A typical "Gen 4" Menghean infantry squad, mechanized-type, consists of seven dismounts: a two-man GPMG team, a two-man anti-tank team, and a three-man assault team. The AT gunner carries a launch unit, and the AT assistant carries an optional night vision sight to attach to it; both carry two rocket tubes, typically with one tandem high explosive and one thermobaric round each. The MG gunner carries a GCh-96R, the lightened, short-barreled version of the GPMG used by the IFV's coaxial and RWS mounts, and is aided by an assistant. Menghean infantry doctrine regards the machine gun as the squad's main long-range anti-infantry weapon, and the Gen 4 squad shifted from using a long-barreled SAW mod of the JS-103 assault rifle to a dedicated GPMG chambered in 7.5x54mm ammunition.

Add on pantser on the hull equipped with the Trophy active protection system (APS), The Trophy APS successfully intercepted rocket-propelled grenades and anti-tank missiles, including 9M133 Kornets



During the late 90's, the ASA military desired a light and highly mobile tracked IFV to complement the wheeled IKM-200 which was also in development at the time. The original design did not have the ability to mount a turret, as it was originally going to have a pintle mounted machinegun and a Gatlon I ATGM mounted. At the time of the development, it was considered paramount for it be short and concpicious. However this was completely abandonded around the same time the project leader died unexpectedly. The Senior head of THE ASA ARM design buearau, Aslon Z. Proy, took the lead of the project, around the time which the military dropped the low siloheutte requirement.

The new design was raised slightly, and hull was modified to be able to allow as big a turret as possible. Apart from making the turret ring bigger, there was now enough space aswell to fit 8 or 9 soldiers. A more powerful engine was installed aswell, along with composite screens that were mounted along the side of vehicle and UFP. The possibility of utilizing a more powerful armament as also exploited, with the 55mm Melhiet SAN/K auto-cannon being mounted, alongside a 13mm coaxially mounted heavy machinegun and the newer Gatlon II ATGM. alongside this, the IFV was given amphibious capbilities, similar to the IKM-200, and thermals for the gunner along with a CITV.

Despite its high tech nature, it faced many obstacles due to budget cuts and various levels of political meddling. The IKM-200 suffered a similar fate aswell, yet they would still press on and into service during the 2000's, with some minor modifications being added.

Add on pantser on the hull

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The Mk.04.200, or IKM-200, is a Albanian APC that entered service in 2004. It was designed to be a highly versatile platform capable of being configured for a whole host of roles. The most common variant has a Gatlon II beam-riding anti-tank missile along with a 13mm heavy machine gun. It first saw active combat against anti-socialist rebels in the north-eastern province of Jarclau in the Muwaic PSR. Its high speed and excellent protection made it highly desirable in the conflict, with its Gatlon II ATGM.

A future variant of the IKM-200 seeing trials includes extra protection in the form of large, bolt on composite screens. New systems are also being designed to further extend the capability of the platform, such as the mounting of an anti-air system (SLaK-P). The mounting of 20mm, 30mm, 40mm and even 53mm auto-cannon's are being considered (All manufactured by Melhiet RF and ARM), to further increase the potency. There is also talks of mounting a 120mm or 105mm cannon to fulfill the role as a light tank.

Add on pantser on the hul



Armored Personnel Carrier

NK-732

Crew 3

Personnel 8

Dimensions and weight

Weight 33 t

Length 7.88 m

Width 2.99 m

Height 2.37 m

Armament

Machine guns 12.7 mm

Grenade launcher 40 mm)

Mobility

Engine MTU 8V 199 TE20 diesel

Engine power 711 hp

Maximum road speed 103 km/h

Range 1 050 km

Maneuverability

Gradient 60%

Side slope 30%

Vertical step 0.8 m

Trench 2 m

Fording 1.2 m

Add on pantser on the hull

© 217 ♥
falsleine Lumpenrusting

Armored Vehicle

ANH-64

Specifications

Mass

16.47 tonnes (18.12 short tons; 16.21 long tons)

Length

6.95 m (22 ft 10 in)

Width

2.72 m (8 ft 11 in)

Height

2.64 m (8 ft 8 in)

Crew

4

Armor

14.5 mm resistant[1]

Engine

Caterpillar 3126 turbo diese

260 kW (350 hp)

Power/weight

ICV: 15.8 kW/t (19.3 hp/sh tn)

Suspension

8×8 wheeled

Operational

range

500 km (300 mi)

Maximum speed

100 km/h (62 mph)

Add on pantser on the hul



KL-57

Medium Tank

Mass

55 t (54 long tons; 61 short tons)

Length

Overall: 10.8 m (35 ft 5 in) Chassis: 7.5 m (24 ft 7 in)

Width

3.6 m (11 ft 10 in)

Height

2.4 m (7 ft 10 in) in standing posture

2 m (6 ft 7 in) in sitting posture

Crew

3 (commander, gunner and driver)

Armor

POSCO MIL-12560H armor steel and Samyang Comtech SiC Grade A, B non oxide ceramic plate along with ERA and NERA modular add-on armor in addition to soft-kill and hard-kill active protection systems

Main

armament

Hyundai WIA CN08 120 mm 55 caliber smoothbore gun (40 rounds)

Secondary

armament

1× 12.7×99mm (.50 BMG) K6 heavy machine gun (3,200 rounds)

1× 7.62×51mm NATO coaxial machine gun (12,000 rounds)

Engine

Lot 1: MTU MT883 Ka-500 4-short stroke, 12-cylinder water-cooled diesel, dry weight: 1800 kg 1,500 hp (1,103 kW)

Lot 2, 3: Hyundai Doosan Infracore DV27K 4-long stroke, 12-cylinder water-cooled diesel, dry weight: 2550 kg

1,500 hp (1,110 kW)

Power/weight

27.2 hp/t (20.28 kW/t)

Transmission

Lot 1, 2: RENK HSWL 295 TM (5 forward, 5 reverse gears), dry weight: 2,450 kg

Lot 3: SNT Dynamics EST15K (6 forward, 3 reverse gears, in development), dry weight: 2500

kg

Suspension

In-arm suspension unit (ISU)

Fuel capacity

1,296 L (342 U.S. gal)

Operationa

range

450 km (280 mi)

Maximum speed

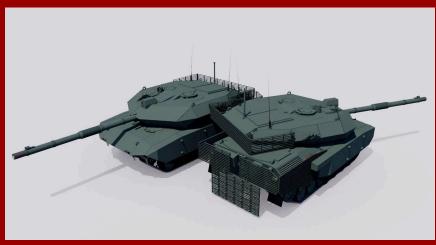
Paved road: 70 km/h (43 mph) Cross country: 50 km/h (31 mph)

Acceleration from 0–32 km/h (0–20 mph) in 7.47 seconds (MT883 Ka-500) or 8.77 seconds

(DV27K)

Add on pantser on the hull

equipped with the Trophy active protection system (APS), The Trophy APS successfully intercepted rocket-propelled grenades and anti-tank missiles, including 9M133 Kornets



UC-22

Heavy Tank

Mass

59 t (65 short tons; 58 long tons)

Crew

3–4

Commander (turret)

Gunner (turret)

Driver (hull)

Additional crew member (hull)

(Each workstation can hand over and take over tasks and roles from others with no reduction of functionality)

Main

armament

Rh-130 L/52 130 mm smoothbore gun (up to 20 ready rounds)

Secondary

armament

12.7 mm co-axial machine gun (250 ready rounds), 7.62 mm NATTER RCWS (2,500 rounds) and optional HERO 120 loitering ammunitions[1]

Engine

MTU MB 873 Ka-501 V-12 water-cooled diesel

1103 kW at 2600 rpm

Power/weight

25 hp/t

Transmission

Renk HSWL 354

Suspension

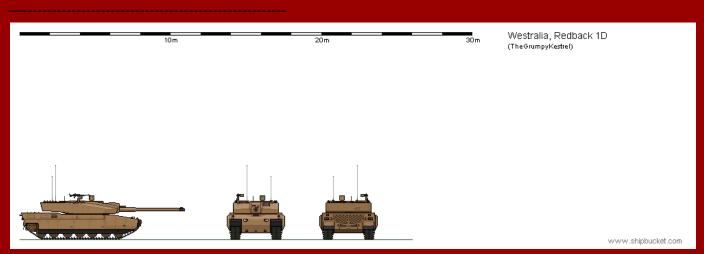
torsion bar

Fuel capacity

1,100 l (242 imp gal; 291 US gal)

Add on pantser on the hull

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NO-55

Land Systems Redback 1D Main Battle Tank

Specifications

Weight: 62.5 tonnes as produced, up to 70.8 tonnes combat ready

Length: 10.95m Gun-Forward

Width: 3.85m with Standard armour package

Height (Commander's Sight): 2.9m Crew: 3 (Commander, Driver, Gunner)

Armour: Chobham composite (exact composition classified), additional MCA applique armour

packages available, frontal package fitted as standard

Main Armament:

- ZM120-55 120mm L55 Smoothbore gun with 34 rounds stored in bustle cassette and an additional 8 rounds stored in bull

Secondary Armament:

- 1 x 7.62mm Coaxial Machine-Gun

- 1 x 7.62mm FN MAG mounted above commander's position Powerplant: EuroPowerPack (MTU MT883 Ka-500/501), 1500hp

Transmission: Renk HSWL 295TM

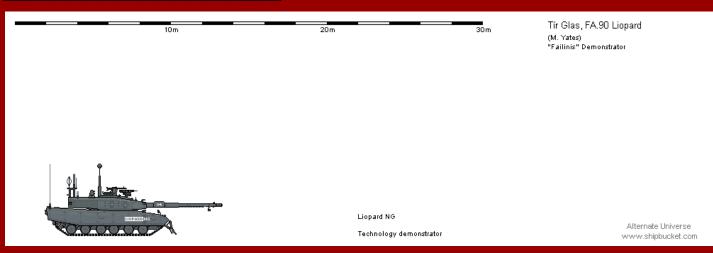
Suspension: Horstman InArm Active-Hydropneumatic Suspension

Operational Range: 500km Speed: 68km/h on-road

46km/h off-road

Add on pantser on the hull

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Specifications - FA.90F/G

Weight: 61.4 tonnes (FA.90G)

Length: 10.32m Width: 3.85m

Height: 2.8m (turret-roof) 3.1m (commander's panoramic sight)

Crew: 3

Armour: Undisclosed arrangement of composite armour, thought to include a mix of heavy metals and ceramics as well as hard and soft-kill countermeasures.

Main Armament:

- -1x 120mm Smooth-bore gun either 44 or 55 calibres in length
- -30rd Bustle-mounted autoloader
- -Up-to twelve further stowed rounds in the hull

Secondary Armament:

- -1x 7mm Coaxial machine gun (4,200rds)
- -1x 13.2mm Heavy machine gun (900rds)

Powerplant: 1,210kW Twelve-cylinder four-stroke multi-fuel engine

Power/Weight: 19.7kW/tonne

Transmission: Ten-speed (5+5) hydrostatic transmission Suspension: Horstman active in-arm suspension units

Ground clearance: Nominally 0.49m

Operational Range: 550km

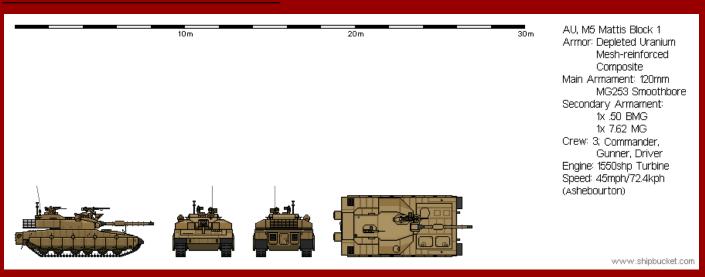
Speed:

>70km/h On-road

0-32km/h in 7.5 seconds

Add on pantser on the hull

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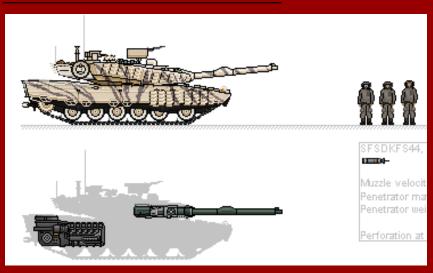
M5

ARMOR: The M5 Mattis shares similarities with the armor on the M1A2 Abrams consisting of depleted uranium mesh-reinforced composite armor. This armor is capable of withstanding various tank shells used by multiple other nations. The low profile of the chassis provides adequate concealment when in a dug-in-emplacement. Reactive armor plating can easily be implemented onto the chassis and turret providing additional protection from kinetic and shape

charged penetrators. Angled armor on the forward portion of the turret is able to deflect rounds and chafe/flare/smoke dispensers are also available. Exhaust deflectors and IR suppression technology is also employed on the back end of the chassis to mask 80% of the exhaust heat signature.

ARMAMENT: The main gun is a 120 mm MG253 smoothbore gun, the same used on the Merkava Mk4. The M5 has a round capacity of 45 rounds. standoff weaponry includes a forward M2 BMG with a capacity of 1,800 rounds mounted above the gunners hatch and a m249B machine gun with a capacity of 2,800 rounds for use by the tank commander.

equipped with the Trophy active protection system (APS), The Trophy APS successfully intercepted rocket-propelled grenades and anti-tank missiles, including 9M133 Kornets



S44



Add on pantser on the hull



Reconnaissance Vehicle

ARV-11

Pre-Dreadnought Dreadnought Ireaty Era & www.ii Cold war Modern Designs

GENERAL CHARACTERISTICS

Length: 7.3m Beam: 7.3m Displacement: 2.5t Machinery: SAPF DE-01 Speed: 80km/h

Speed: 80km/h Range: 200km

Complement: 3 Tankmen

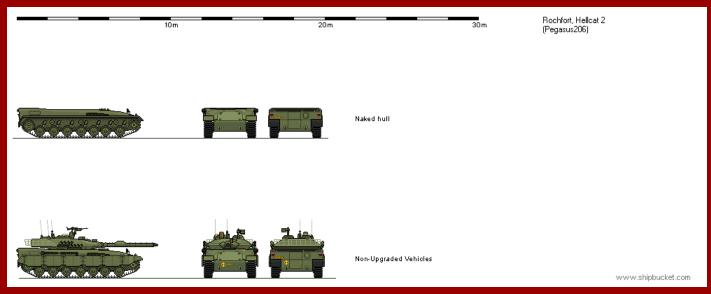
Aircraft: N/A

Armament: 40mm ETC Autocannon 52. HMG

7.82 HMG (Cased) 120mm Pilebuster ATGM Electronics: GARLIS GSR CELOR Thermals

Norrin CITV

Add on pantser on the hull



Specifications – HELLCAT 2A1

Type: Third-generation Main-Battle-Tank

Origin: Rochfort

Manufacturer: Tawue Military Vehicles/DeGreaff Heavy Industries

In Service: 1979 -onwards No. Built: >3500 Hellcats Weight: 63,74 tonnes

Length: 9.14m Width: 3.66m

Height: 2.98m (commander's panoramic sight)

Crew: 4+ 4 troops

Armour: Chobham (classified)

Main Armament:

-1x 120mm RDI smootbore gun with 50 rounds stored in the hull And all hellcats can fire LAHAD

Secondary Armament

- -1x 7,65mm Coaxial machine gun (4,200rds)
- -1x 7,65mm MG-6 machine gun(1800rds)
- -1x 12,7mm Heavy machine gun (1800rds)

Powerplant: MTU 1,200hp Twelve-cylinder turbo charged liquid cooled multi-fuel engine

Transmission: Renk/Swartz HSWL355 fully atomatic gearbox

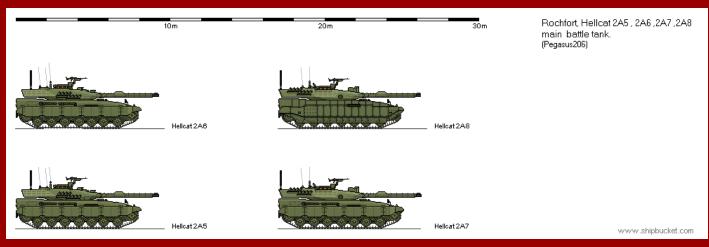
Suspension: Torsion bar spring mounted support roller drive with hydraulic dampers

Ground clearance: Nominally 0.40m

Operational Range: 400km

Speed:

>65km/h On-road



HELLCAT 2A5

Improved turred design

Upgraded fire-control system components, from Electro Optics Industries (EL-OP) and Elbit, provides the tank with the ability to engage moving targets while on the move (an automatic target tracker),

Upgraded NBC protection systems,

Locally developed central air-conditioning system

HELLCAT 2A6

New turred design and new Armour : Chobham / Dorchester Level 2 (classified)

New MTU 1500hp v12 dubble turbo watercooled multi fuel engine

Upgraded and strengthened track

When ammunition is unloaded the tank can carry up to 8 dismounted soldiers or 3 stretchers.

Troops enter and leave the vehicle through the rear hatch.

HELLCAT 2A7

Impoved turred

The model has a new fire-control system, the El-Op Knight Mark 4. The computer-controlled fire control system can acquire and lock onto moving targets, even airborne helicopters, while the tank itself is on the move. It includes line-of-sight stabilisation in two axes, a second-generation television sight and automatic thermal target tracker, a laser range finder, an improved thermal night vision system and a dynamic cant angle indicator. An Amcoram LWS-2 laser warning receiver notifies the crew of threats like laser-guided anti-tank missiles, which can fire smoke grenade launchers to obscure the tank from the laser beam. Electromagnetic warning against radar illumination is also installed

HELLCAT 2A8

Add on pantser on the hul



T-77A Berenova

Specifications

Weight: 44 tonnes

Length: 6.78m (hull), 9.18m (inc. gun),

Width: 3.75m (inc. skirts)

Height: 2.44m (commander's cupola)

Crew: 3

Armour: composite (classified)

Main Armament:

1x 120mm Skoda K25 smoothbore gun with 36 rounds in autoloader carousel and 12 rounds

stored in the hull

Secondary Armament:

1x 7.62mm MG-6T coaxial machine gun (4,000 rounds)

1x 12.7mm MG-9AT anti-aircraft heavy machine gun (1,800 rounds)

Powerplant: 775hp Berez-FIAT BF12V15T 12-cylinder turbocharged liquid cooled diesel engine

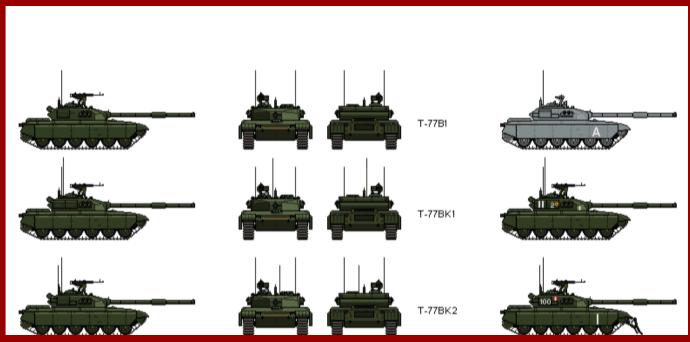
Transmission: 7-gear manual gearbox

Suspension: torsion bar spring mounted support roller drive with hydraulic dampers

Ground clearance: 45cm (normal)

Operational Range: 460km

Speed: 60km/h (road), 40km/h (cross-country)



T-77B Berenova

Specifications

Weight: 45.75 tonnes

Length: 6.78m (hull), 9.18m (inc. gun),

Width: 3.84m (inc. skirts)

Height: 2.44m (commander's cupola)

Crew: 3

Armour: composite (classified)

Main Armament:

1x 120mm Skoda K25 smoothbore gun with 36 rounds in autoloader carousel and 12 rounds

stored in the hull

Secondary Armament:

1x 7.62mm MG-6T coaxial machine gun (4,000 rounds)

1x 12.7mm MG-9AT anti-aircraft heavy machine gun (1,800 rounds)

Powerplant: 1,000hp Berez-FIAT BF12V15BT 12-cylinder turbocharged liquid cooled diesel

enaine

Transmission: 7-gear manual gearbox

Suspension: torsion bar spring mounted support roller drive with hydraulic dampers

Ground clearance: 45cm (normal)

Operational Range: 460km

Speed: 60km/h (road), 38km/h (cross-country)



T-77T Berenova

Specifications

Weight: 45.25 tonnes

Length: 6.7m (hull), 9.09m (inc. gun),

Width: 3.84m (inc. skirts)

Height: 2.44m (commander's cupola)

Crew: 3

Armour: composite (classified)

Main Armament:

1x 120mm Skoda K25 smoothbore gun with 36 rounds in autoloader carousel and 12 rounds

stored in the hull

Secondary Armament:

1x 7.62mm MG-6T coaxial machine gun (4,000 rounds)

1x 12.7mm MG-9AT anti-aircraft heavy machine gun (1,800 rounds)

Powerplant: 1,000shp Tumansky TU-GT9 gas turbine

Transmission: 8-gear automatic gearbox

Suspension: torsion bar spring mounted support roller drive with hydraulic dampers

Ground clearance: 45cm (normal)

Operational Range: 270km

Speed: 70km/h (road), 46km/h (cross-country)



T-77M Berenova

Specifications

Weight: 46 tonnes

Length: 6.7m (hull), 9.09m (inc. gun),

Width: 3.84m (inc. skirts)

Height: 2.44m (commander's cupola)

Crew: 3

Armour: composite (classified) (plus T-77M2 has ERA blocks)

Main Armament:

1x 120mm Skoda K25M2 smoothbore gun with 50 rounds in autoloader carousel

Secondary Armament:

1x 7.62mm MG-6T coaxial machine gun (4,000 rounds)

1x 12.7mm MG-9ATM anti-aircraft heavy machine gun (1,800 rounds) (remote-controlled)

Powerplant: 1,250shp Tumansky TU-GT11M gas turbine

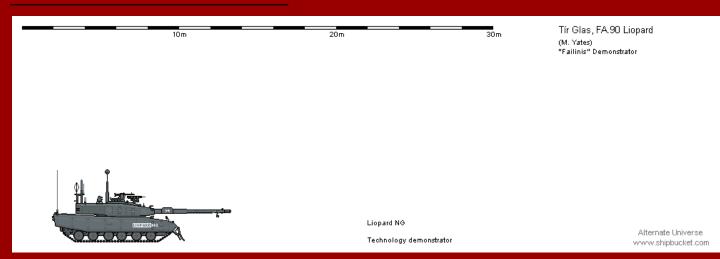
Transmission: 8-gear automatic gearbox

Suspension: torsion bar spring mounted support roller drive with hydraulic dampers

Ground clearance: 45cm (normal)

Operational Range: 315km

Speed: 70km/h (road), 46km/h (cross-country)



The FA.90 Liopard (Feithicil Armúrtha 90 Leopard) is a main battle tank (MBT) designed and manufactured by Byrne Heavy Industries (BHI) as a replacement for the FA.79 Leon and FA.83 Tíogar. It entered service with the Glasic Army in 1990. It itself has begun to be supplemented with the FA.15 Pantar.

With the adoption of the Tiogar the Glasic defence procurement agency was already looking to the future with an eye on replacing the FA.79 entirely, as a result prototypes for replacement vehicles were produced between 1978 and 1983. Some were based on the FA.79 with complete with the wedge shaped upper and lower glacis whilst others featured a three-part glacis.

Major contract work was undertaken by Timoney Automotive, Timoney Technology and Brennan Brown alongside the Defence Research and Technology Exploitation Institute (RTEI). After the desired vehicle layout had become frozen a further series of prototypes were constructed, completed in 1981. A second series of prototypes were constructed in 1986/87 incorporating improvements for issues identified during trials. These were the first in the series to be equipped with a 120mm gun, derived from the Rh-120. The second and third series of trials between 1986 and 1988 further refined the vehicle's design with low rate initial production beginning in 1989. Troop trials prior to mass-production rectified several small issues brought up by troops which were incorporated into the final production design. Mass production commenced in 1990 and has continued to the current day.

Armament

The Liopard currently mounts a 120mm smooth-bore gun of either 44 or 55 calibres in length but was designed from the outset with a larger weapon in mind, this only now becoming relevant with the prototyping of a 130mm weapon in 2015.

The gun is fed by a 30 round bustle-mounted autoloader (continuous conveyor-belt type) developed by Timoney Technology. As with other autoloader-equipped tanks, the FA.90 has smaller crew of three. The ability to operate without a loader allows for the the use of a smaller turret than otherwise be possible. The autoloader has a cycle time of around two seconds, with the practical loading and firing cycle for a single target being between 4–6 seconds. Other than the autoloader there is the possibility to stow a further 12 rounds in the fighting compartment in space gained through the introduction of the removable power-pack.

Mounted to the gun's immediate left is the 7mm coaxial machine gun which is of the chain type whilst in front of the gunner's hatch is a spigot for another 7mm weapon, some 4,200 rounds being carried for the two weapons. In recent years the latter has tended to be supplanted by a 7mm or 13.2mm remote weapon station on the turret's centreline.

Protection

The Liopard like many contemporary tank designs utilises composite armour, the exact composition of which has not been disclosed. The hull of the Liopard is of all-welded construction whilst the turret is of mixed construction with a cast front and welded rear.

Crew safety was paramount during the design phase which lead to the use of a solid state electric drive for the turret and gun's movement as well as the decision to use a chain gun for the coaxial weapon. These decisions removed both the traditional risk of hydraulic fires in the crew compartment when hit as well as the build-up of gun gasses during prolonged firing of the coaxial gun. Furthermore the lower profile afforded by both the vehicle itself and its suspension compared to its contemporaries further enhances its survivability on the battlefield.

Newer production vehicles, that have slowly started to replace older vehicles on a one for one basis introduce have introduced further improvements to protection, including but not limited to the introduction of newer steel alloys as well as a more extensive use of titanium alloys to save weight (the net gain of which being somewhere in the region of 500kg) as well as increasing protection in some areas.

Mobility

The FA.90 in its current form utilises a wholly removable power-pack consisting of a 12-cylinder four-stroke engine of 1,210kW coupled to a ten speed transmission, giving a power to weight ratio in excess of 19kW/tonne comparing favourably with many of its contemporaries. The hydro-pneumatic suspension units, which are mounted on all road wheels, can be adjusted on-the-move to deal with uneven terrain as well as lowering the vehicle's profile in hull down positions.

During testing, the FA.90's acceleration has been measured accelerating from a standing start to 35kmh in 5.5 seconds albeit in its basic form without appliqué armour.

Crew-Amenities

The Liopard features a heavily reclined driver's position similar to that found on the Abrams with the driver being flanked on either side by self-sealing fuel cells. The fighting compartment itself is split into two zones, bifurcated by the stroke of the autoloader. The commander has duplicate gunner controls, being able to gun the tank when required whilst the gunner is able to view the commander's panoramic sight picture albeit not operate the sight itself. Like all post-PSW Glasic tanks, the Liopard features a boiling vessel for making hot beverages and heating ration packs.

Ungrades

The Liopard has been progressively updated since its introduction, now being on the F and G variants.

Liopard Enhancement and Augmentation Program (LEAP)

LEAP was the first major upgrade to the Liopard consisting of the introduction of a removable power-pack, L55 main gun and fully digital fire-control system. This is the basis from which all further upgrades have been carried out and is the default export standard for the Liopard.

Liopard Improvement and Advancement Review (LIAR)

The LIAR initiative, spurred by experience in the Jedorian civil war that showed just how vulnerable tanks were in an urban setting. The resulting upgrades focussed on remedying the situation with most Liopards receiving appliqué belly and roof armour packages to deal primarily with mine and top-attack threats whilst also receiving bar armour around the engine compartment and thicker side-skirts over a greater length of the vehicle.

Liopard Technology Insertion and Capability Upgrade Program (TICUP)

The TICUP series of upgrades are the current standard to which the forward Liopard fleet are held. Vehicles have been comprehensively re-wired, fitted with new fire-control and situational awareness systems as well as the introduction of hard and soft-kill countermeasures. Further appliqué armour has been added covering the front two thirds of the vehicle as well as the entire turret, with bar armour remaining over the engine compartment. TICUP also introduced a new power-pack and transmission, freeing up further space within the hull as well as lowering the weight of the vehicle.

Technology Test Bed (TTB)

In 2014 a pair of technology demonstrators were created from developmental vehicles to work out future development paths for the type. TTB-1 encompassed the majority of upgrades that would later be undertaken as part of TICUP whilst TTB-2 went a step further by introducing a hybrid-electric drive and more comprehensive appliqué armour kit. TTB-2 also received one of the prototype 130mm guns under development by RTEI as well as a 13.2mm coaxial weapon and completely new combat system including a "see-through-armour" system and Li-ion batteries for engine-less operation whilst stationary.

Specifications - FA.90F/G

Type: Third-generation Main-Battle-Tank

Origin: Tír Glas

Manufacturer: Byrne Heavy Industries, shadow production by Timoney Automotive

Weight: 61.4 tonnes (FA.90G)

Length: 10.32m Width: 3.85m

Height: 2.8m (turret-roof) 3.1m (commander's panoramic sight)

Crew: 3

Armour: Undisclosed arrangement of composite armour, thought to include a mix of heavy metals and ceramics as well as hard and soft-kill countermeasures.

Main Armament:

- -1x 120mm Smooth-bore gun either 44 or 55 calibres in length
- -30rd Rustle-mounted autoloader
- -Un-to twelve further stowed rounds in the hull

Secondary Armament:

- -1x 7mm Coaxial machine gun (4,200rds)
- -1x 13.2mm Heavy machine gun (900rds)

Powerplant: 1,210kW Twelve-cylinder four-stroke multi-fuel engine

Power/Weight: 19.7kW/tonne

Transmission: Ten-speed (5+5) hydrostatic transmission Suspension: Horstman active in-arm suspension units

Ground clearance: Nominally 0.49m

Operational Range: 550km

Speed:

>70km/h On-road

0-32km/h in 7.5 seconds



GFT-77

Specifications
Weight: 46 tonnes
Length: 6.78m

Width: 3.75m (inc. skirts)
Height: 3.89m (to top of radar)

Crew: 3

Armour: steel

Main Armament:

2x 30mm Skoda vZ.70A automatic cannon smoothbore gun with 320 AA and 40 AT rounds Powerplant: 775hp Berez-FIAT BF12V15T 12-cylinder turbocharged liquid cooled diesel engine

Transmission: 7-gear manual gearbox

Suspension: torsion bar spring mounted support roller drive with hydraulic dampers

Ground clearance: 45cm (normal)

Operational Range: 460km

Speed: 60km/h (road), 38km/h (cross-country)



OK-5

Missile projector

Mass

43 t

Length

12 m (39 ft 4 in)

Width

3 m (10 ft)

Height

3 m (10 ft)

Crew

4

Caliber

300 mm (12 in)

Rarrels

16

Maximum firing range

70–130 km (43–81 mi)

Engine

Diesel engine

500 hp (370 kW)

Suspensior

8×8 wheeled

Operational

range

650 km (400 mi)

Maximum speed



NLA4

Missile Projector

Dimensions and weight

Weight ~ 40 t

Length 12.67 m / 13 m

Width 3 m

Height 3.29 m

Armament

Caliber 220 mm / 300 mm

Number of tubes 30 / 12

Rocket weight 280 kg / 800 kg

Warhead weight 90 - 100 kg / 280 kg Firing range up to 34 km / up to 90 km

Full salvo duration 14 - 60 s / 22 - 40 s

Reloading time 15 ~ 20 minutes

Mobility

Engine YaMZ-846 diese

Engine power 500 hp

Maximum road speed 70 km/h

Range 1 000 km

Maneuverability

Gradient 45%

Side slope 30% Vertical step ~ 0.6 m

Trench 2 m

Fording 1.4 m



NRO-2 Self Towed Artillery

Length

11.4 m

Width

2.5 m

Height

3.4 m

Crew

5

Caliber

155 mm

Main

armament

155 mm/52-calibre





Bison 1 AEV vehicle : 165 mm Gun.
Rhino 1 en 2 155mm sp how: Rhino 1 range 18 km RAP 30km Rhino 2 range 35km max range 56 km depending from used Ammo



Pre-Dreadnought Dreadnought Treaty Era & WWII Cold War Modern Designs

GENERAL CHARACTERISTICS

Length: 7.3m Beam: 7.3m Displacement: 2.5t Machineny: SAPF DE-01 Speed: 80km/h Range: 200km

Complement: 3 Tankmen

Aircraft: N/A

Armament 40mm ETC Autocannon 52. HMG 7.82 HMG (Cased) 120mm Pilebuster ATGM Electronics: GARLIS GSR CELOR Thermals Norrin CITV

www.shipbucket.com

Thalean Republic, Mo.11 "Caltrop" Cavalry Air Defense (Polydegmon)

Anaideia

MO-11

Armamont

1x 35mm autocannon (~600 RPM)

4x 2Q82C missile -Range: 9.8km -Ceiling: 6km

-Max speed: Mach 3.6

-Warhead: 6x independent tungsten darts separated and shot forwards a charge -Guidance: laser beam-riding, automatic tracking done by turret optical systems

Vehicle

Operational range: 1000km Top Speed: 100km/h

Add on pantser on the hull



KL-44 Mass

4,200 kg (9,300 lb)

Length

Combat: 10.7 m (35 ft) Travel: 9.5 m (31 ft)

Barrel length

5.08 m (16.7 ft) L/39

Crew 7+1 Shell

M107, M549, M712 Copperhead, M795, ERFB, M982

Caliber

155 mm (6.1 in)

Carriage

Split trail

Elevation

 0° to +71.7°

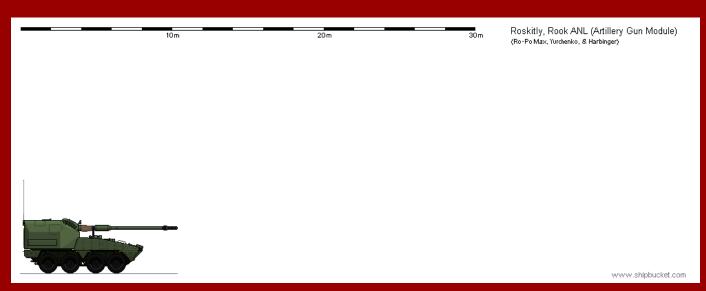
Rate of fire

Normal: 2 rpm Maximum: 4 rpm Muzzle velocity

Charge 8S: 827 m/s (2,710 ft/s)

Effective firing range M107: 21 km (13 mi) M795: 23.5 km (14.6 mi) ERFB: M795E1 30 km (19 mi) base bleed

Excalibur: 40 km (25 mi)



RO-3

Specifications

Crew

4 (driver, loader, gunner, commander)

Traverse

360°

Rate of fire

3 rpm (10 rpm with autoloader)

Effective firing range

70 km (rocket-assisted round)

Main

armament

155 mm L/58 XM907 gun

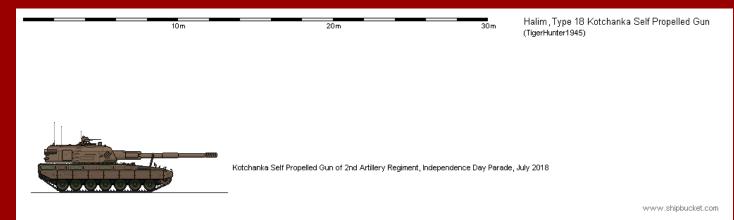
Engine

Cummins diese

600 hp (450 kW)

Suspension

torsion bar



Kotchanka Self Propelled Gun with all new 155mm gun capable for sustained high rates of fire, Automated ammunition handling and loading and embedded command and control

Specifications - Kot SPA

Type: Self Propelled Gun Origin: Halim Republics

Manufacturer: Mavrova Military Kaprik

Mass: 60.3 tonnes

Length: 9.2 m gun included

Width: 4.3 m

Height: 2.7 m to turret roof

Crew: 3

Armour: 900mm at best

Main Armament: Sena 120mm L/47 smoothbore gun, automatically loaded

Secondary Armament: 1x 7.92 mm KP/78 coaxial, 1x 13mm LKMS HMG in RCWS

Powerplant: Bryanks 2,000 hp Power/Weight: 26hp/tonne Operational Range: 500km

Speed: 70km/h on road, 45km/h offroad



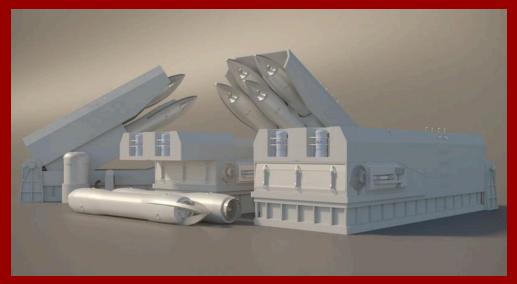
SAM System

KAT-0

Max. target speed 4.8 km/s (17,000 km/h; 11,000 mph; Mach 14)
Target detection distance (km) 1400
Range against aerodynamic target (km)
Maximum 1200 km
Altitude limits for aerodynamic target (km)
Maximum 3000 km

27 (easily)/30, 56 (9m96e2), up to 185 km (40H6E) 0.005(9M96)/0.01(all)
Range against tactical ballistic targets (km)
Maximum 1200 km

The number of simultaneously engaged targets (full system)
The number of simultaneously guided missiles (full system)160. can use 2 missile to attack 1 target



SAM System

KOS-01

Specifications

Engine

Two-stage

Operational

range

2400km

Flight ceiling

>3000km

Maximum speed

Hypersonic

Guidance

system

Inertial navigation system (INS) gimbaled seeker

Steering

system

Thrust vectoring

Launch

platform

Rapid launch fortified underground silos

Targeting system

Radar based



SAM System 101KS-N

Specifications

Mass

900 kg (2,000 lb)

Lenath

6.17 m (20 ft 3 in)

Diameter

Operational range

2650 km

Flight ceiling

3050 km

Maximum speed

2,800 m/s (10,000 km/h; 6,300 mph; Mach 8.2)

Guidance system

Indium-antimonide imaging infra-red seeker/radar based

Accuracy (Hit to kill)

Holder

Fortified fixed position



Surface to Air Missile System (SAM-2022)

The Surface to Air Missile System 2022 (SAM-2022) is a highly advanced and technologically superior missile defense system developed for the purpose of intercepting and neutralizing all types of modern aerial threats. The SAM-2022 has been designed with a focus on precision, accuracy, and reliability; ensuring maximum effectiveness in a range of different combat scenarios.

Specifications:

- 1. System Range: 200-500 km (operational)
- 2. Maximum Altitude: 80,000 ft (interception)
- 3. Reaction Time: 5 seconds (initial acquisition) to 30 seconds (interception)
- 4. Guidance Method: Active electronically scanned array (AESA) radar, infrared homing, and GPS
- 5. Target Acquisition: Continuous Wave Illumination Radar (CWI), up to 100 targets simultaneously
- 6. Radar Range: 2,000 km (search), 800 km (target acquisition), 350 km (tracking and guidance)
- 7. Warhead: High-explosive fragmentation (HE-FRAG), 180 kg
- 8. Missile Speed: Mach 6.5 (maximum), Mach 3.2 (cruise)
- 9. Missile Length: 6.6 m
- 10. Missile Diameter: 0.56 m

- 11. Missile Weight: 1,850 kg (loaded)
- 12. Fuel: Solid rocket propellant
- Launcher Configuration: Vertical Launch System (VLS), eight missile cells per launcher
- 14. Reloading Time: 6 minutes per missile cell
- 15. System Mobility: Road-mobile, air-transportable, and shipborne compatible
- 16. Deployment Time: 30 minutes (ground), 25 minutes (shipborne)
- 17. Crew Requirements: 4 personnel Operator, Radar Technician, Missile Technician, and Communications Officer
- 18. Video/Image Resolution: 4K Ultra HD for target acquisition and tracking
- 19. Endurance: 72 hours of continuous operation (with refueling and reloading)

Features:

- 1. Advanced Radar Systems: The AESA radar system allows the SAM-2022 to detect, track, and intercept multiple targets simultaneously, while minimizing interference from environmental conditions, such as adverse weather or terrain.
- 2. Multispectral Sensors: A combination of radar, infrared, and optical sensors increases the probability of detection and provides advanced target identification capabilities for improved accuracy.
- 3. Countermeasure Resistance: The SAM-2022 employs various tactics to counter incoming anti-radar and jamming measures, such as frequency hopping and emitter deception techniques. This ensures the system remains functional even in highly contested environments.
- 4. Network-centric Capability: The SAM-2022 can be integrated into a larger defense network, allowing it to efficiently share real-time data and coordinate with other air defense systems for a fully unified response.
- 5. Extreme Mobility: With rapid deployment and transportation capabilities, the SAM-2022 can be quickly positioned and utilized in any theater of operations, from land to sea.
- 6. Modular Design: The SAM-2022 is capable of easily interfacing with existing defense systems and technologies, which ensures the system remains up-to-date and compatible with future advancements

By combining cutting-edge technology, unmatched accuracy, and rapid response times, the SAM-2022 is the ultimate solution for safeguarding against a wide range of missile threats in modern warfare scenarios



Celeritas-Borealis Missile Interceptor (CBMI)

The Celeritas-Borealis Missile Interceptor (CBMI) is a hypothetical, high-speed ground-based interceptor designed to detect and eliminate international ballistic missiles before they reach their intended targets. The CBMI system employs state-of-the-art technology in radar detection, hypersonic propulsion, and precision targeting for maximum efficiency and reliability.

Specifications

Interceptor Type: Ground-based, hypersonic anti-ballistic missile

- Manufacturer: Imaginary Technologies Corporation

Weight: 69,855 kg (154,000 lbs)Length: 13.71 m (44 ft 11 in)Diameter: 1.9 m (6 ft 2 in)

- Warhead: Modular high-explosive fragmentation with 15,000 tungsten pellets (3,179 kg or 7,000 lbs)

- Blast Yield: 2.2 gigajoule (525 kg TNT equivalent)

- Operational Range: 6,500 km (4,038 mi)

- Maximum Speed: Mach 17 (21,216 km/h or 13,184 mph)

- Guidance System: Active electronically-scanned array (AESA) radar with infrared and electro-optical sensors

- Detonation Mechanism: Laser proximity and impact fuzing

Key Features

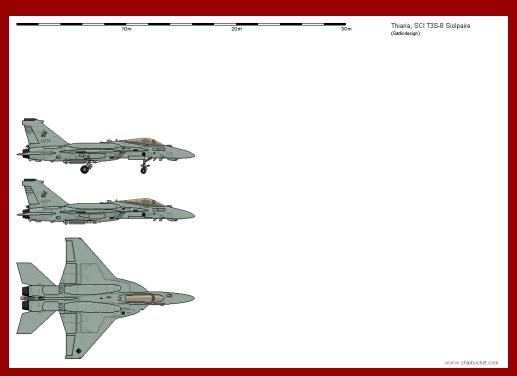
1. Advanced Detection System: The CBMI system utilizes a network of multi-sensor, high-resolution radar arrays capable of tracking and identifying multiple incoming ballistic

missiles simultaneously. These arrays are capable of detecting a target with a radar cross-section as small as 0.003 m² (0.032 sq ft) at a distance of up to 5,600 km (3,480 mi).

- 2. Hypersonic Propel System: Powered by Imaginary Aerospace's breakthrough scramjet technology, the CBMI interceptor reaches hypersonic velocities, allowing it to adapt to rapidly changing flight paths and engage multiple threats in a short time frame.
- 3. Precision Targeting: Utilizing an advanced guidance system with active electronically-scanned array (AESA) radar, infrared, and electro-optical sensors, the CBMI interceptor is capable of accurately tracking and engaging high-speed, maneuvering targets with extreme precision.
- 4. Modular Warhead: The interceptor's high-explosive fragmentation warhead is designed to destroy incoming ballistic missiles by detonating in close proximity, with 15,000 tungsten pellets causing catastrophic damage to the missile's structure and guidance systems.
- 5. Dual Mode Detonation: The CBMI interceptor uses a combination of laser proximity and impact fuzing systems to ensure reliable detonation of the warhead, minimizing the chance of interceptions being spoofed or decoyed.
- 6. Low Maintenance Requirements: The CBMI interceptor's design incorporates several advanced materials and manufacturing techniques to reduce maintenance costs and increase operational readiness, ensuring the system can be relied upon in times of conflict.

Deployment Scenarios

The Celeritas-Borealis Missile Interceptor system is designed to protect nations from the growing threat of ballistic missile attacks. CBMI interceptors can be strategically positioned near high-priority targets, such as major cities and critical infrastructure, to provide a robust and responsive defense against potential threats. In the event of an incoming missile, CBMI systems can communicate with each other to identify the most suitable interceptor to engage the target, ensuring minimal collateral damage and maximizing the probability of a successful interception.



Multirole Aircraft

T-3S8

Specifications

Crew: 1

Length: 16,20m Wingspan: 11,00m Height: 5,02m Wing area: 45m²

Empty Weight: 9.600kg (T3S-7/8: 10.250kg) Loaded Weight: 14.500kg (T3S-7/8: 15.200kg) Max Takeoff Weight: 19.550kg (T3S-7/8: 22.200 kg)

Fuel Capacity: 4,500kg internally (plus 2x 1.600kg conformal fuel tanks on T3S-7); O3S (all

versions) only 4.000kg internally

Powerplant: 2 x SCI RT4S afterburning Turbofan (48kN dry / 75kn with reheat); 2x 2x SCI RT7S (60/90 kN) on T3S-7 and -8; GE F404 (49/79kN) on Swiss and GE F414 (62/98 kN) on Polish machines

Performance

Max Speed: Mach 2 (2,160km/h) at 10.000m, Mach 1,2 (1,480km/h) at sea level; T3S-6: Mach

2,2 (2.380 km/h) at 10.000m

Cruise Speed: Mach 0,9 (970 km/h) at 10.000m; Mach 1,2 supercruise (1.300km/h) at 10.000m

from T3S-6

Combat Radius: 850km air-to-air, 500km with full weapons load (T3S-7/8 with conformal tanks

800km with full weapons load); O3S (all versions) 450km fully loaded

Ferry Range: 3.500km (T3S-7/8 with conformal fuel tanks: 4.800km); O3S (all versions):

3.000km resp. 4.200km with conformal fuel tanks)

Service Ceiling: 15,000m

Rate of Climb: 245m/s (T3S-6: 280 m/s, T3S-7/8: 265 m/s)

Wing Loading: 385kg/m² at MTOW

Thrust/weight: 1,05 loaded (1,20 in T3S-7/8)

Maximum g-load: +9/-3g

Armament

Guns: 1 x DEFA 554 30mm with 280 rounds of ammunition

Hardpoints: 4 wing (2 wet) [6 on T3S-7], 1 centreline (wet) and 2 waist [conformal from T3S-4]

with a capacity of 5,000kg of ordnance [6.500kg on T3S-7]

Stores (Thiarian Navy Service)

T3S-1: Matra Super 530F and Matra 550 Magic AAMs, AS.30 ASMs, dumb bombs, laser guided

bombs

T3S-4: Mica AAMs, AS.30 and SM.39 ASMs, dumb bombs, laser/TV/GPS guided bombs

T3S-7: Mica, Super Mica ER and Meteor AAMs, ANS, SCALP and Polyphem ASMs, ARMIGER

ARMs, Bkp-90 cluster glide bombs, laser/TV/GPS guided bombs

Avionics

AN/APG-81 AESA radar[466]

AN/AAQ-40 Electro-Optical Targeting System[467]

AN/AAQ-37 Electro-Optical Distributed Aperture System[468]

AN/ASQ-239 Barracuda electronic warfare/electronic countermeasures system[469]

AN/ASQ-242 CNI suite, which includes

Harris Corporation Multifunction Advanced Data Link (MADL) communication system

Link 16 data link

SINCGARS

An IFF interrogator and transponder

HAVE QUICK

AM, VHF, UHF AM, and UHF FM Radio

GUARD survival radio

A radar altimeter

An instrument landing system

A TACAN system

Instrument carrier landing system

A JPALS

TADIL-J JVMF/VMF



SM-27 **Fighter Aircraft**

Crew: 1

Length: 20.1 m (65 ft 11 in) Wingspan: 14.1 m (46 ft 3 in) Height: 4.6 m (15 ft 1 in) Wing area: 78.8 m2 (848 sq ft)

Empty weight: 18,000 kg (39,683 lb)

Gross weight: 25,000 kg (55,116 lb) normal takeoff weight, 29,270 kg (64,530 lb) at full load

Max takeoff weight: 35,000 kg (77,162 lb) Fuel capacity: 10,300 kg (22,700 lb)

Maximum speed: (2,135 km/h; 1,600 mph) at altitude (2000 km/h; 1600 mph) supercruise at altitude

Range: 3,500 km (2,200 mi, 1,900 nmi) subsonic, 4,500 km from 2 outboard fuel tanks[243]

Supersonic range: 1,500 km (930 mi, 810 nmi)

Service ceiling: 20,000 m (66,000 ft)

g limits: +9.0

Wing loading: 371 kg/m2 (76 lb/sq ft) normal takeoff weight

Thrust/weight: 1.16 at normal takeoff weight (0.99 at loaded weight with full fuel)

Guns: 1 × 30 mm Gryazev-Shipunov GSh-30-1 autocannon

Hardpoints: 12 hardpoints (6 × internal, 6 × external)

Air-to-air missiles:

R-77M R-74M2 izdeliye 810 Air-to-surface missiles:

4 × Kh-38M, Kh-59MK2[243]

Anti-ship missiles

2 × Kh-35U, Kh-31 etc.

Anti-radiation missiles:

4 × Kh-58UShK

KAB-250 guided bomb

KAB-500 guided bomb

Anti-tank "Drill" 500 kg cluster-bomb + active homing

Sh-121 multifunctional integrated radio electronic system (MIRES)

Byelka radar (400 km, 60 tracks with 16 targeted)

N036-1-01: Frontal X-band active electronically scanned array (AESA) radar

N036B-1-01: Cheek X-band AESA radars for increased angular coverage

N036L-1-01: Slat L-band arrays for IFF

L402 Himalayas electronic countermeasure suite

101KS Atoll electro-optical targeting system

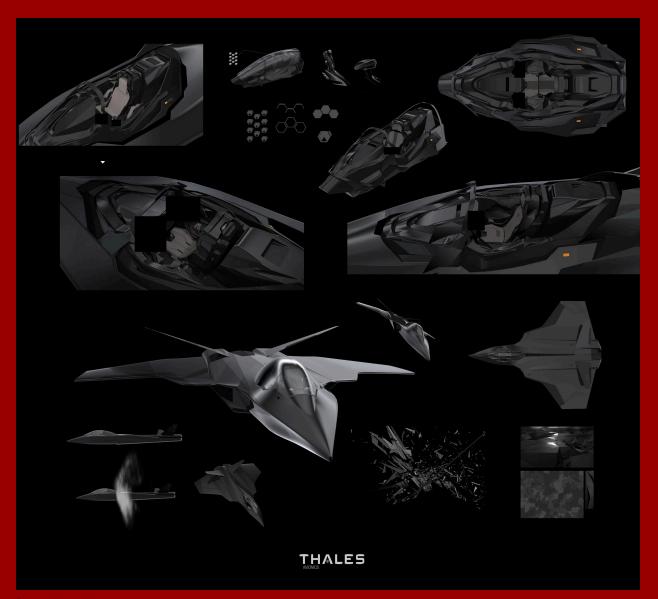
101KS-O: Laser Directional Infrared Counter Measures

101KS-V: Infrared search and track

101KS-U: Ultraviolet missile approach warning system

101KS-N: Targeting pod

101KS-P: thermal imager for low altitude flying and night landing



SuperKet-X

Dimensions

- Length: 19.8 meters
- Wingspan: 14.2 meters
- Height: 5.2 meters
- Wing Area: 54.6 m²

Weight

- Empty Weight: 11,500 kg- Loaded Weight: 24,000 kg- Max Takeoff Weight: 32,000 kg

Performance

- Maximum Speed: Mach 6.2- Cruise Speed: Mach 4.5

- Range: 3,500 km

- Service Ceiling: 25,000 meters

- Rate of Climb: 550 m/s

Armament

- Guns: 1× 30 mm SHKU-3/A seven-barrel Gatling gun

- Hardpoints: 12 with a capacity of 10,000 kg

- Missiles:

- Air-to-air: 8× RKM-180D AMRAAM - Air-to-surface: 6× AKL-89G HARM

- Bombs:

- 2× GTV-31 JDAM

- 2× GTV-56/S StormBreaker

Avionics

- Radar: AN/NPG-87J ASA radar with 360-degree coverage

- EW Suite: Advanced Integrated Defensive Electronic Warfare Suite (AIDEWS UKK)

- Communication: Secure Multi-band COMSAT with quantum encryption

Powerplant

- Engine: 2× T479-PW-110 enhanced turbofans

- Dry Thrust: 30,000 lbf (133 kN) each

- Thrust with Afterburner: 45,000 lbf (200 kN) each

Additional Features

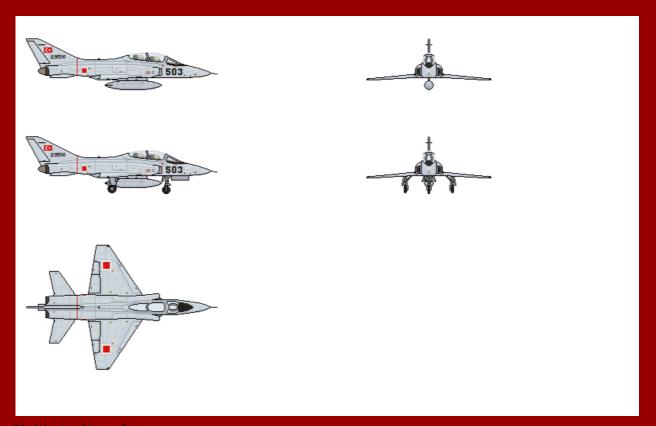
- Stealth Capability: Radar cross-section reduced by 80%

- Fuel Efficiency: 0.75 kg/km

- Pilot Interface: Enhanced Al-assisted cockpit with immersive AR HUD and neural interface

Advanced Systems

- Advanced Kinetic Energy Missile Defense System: Equipped with miniature interceptor missiles to counter incoming anti-aircraft missiles.
- Adaptive Camouflage: Active camouflage system that dynamically adjusts the aircraft's exterior to match the surrounding environment. (Only when moving at max speed, noticeable by automatic targeting systems)
- Swarm Drone Integration: Can control and deploy a swarm of combat drones for reconnaissance and coordinated attacks (2 in number).



Multirole Aircraft

Specifications for the F-7C Shark

General characteristics

Crew: 1

Length: 36 ft 9 in (11.20 m)

Wingspan (without missiles): 24 ft 8 in (7.5 m)

Height: 8 ft 2 in (2.5 m)

Empty weight: 5,980 lb (2,713 kg) Gross weight: 10,247 lb (4,648 kg) Max takeoff weight: 11,875 lb (5,386 kg)

Powerplant: 2 x General Electric J85-GE-5A afterburning turbojet engines, 2,680 lbf (12 kN)

thrust each dry, 3,850 lbf (17 kN) with afterburner

Performance

Max speed: Mach 7.2

Combat range: 262 nmi (300 km; 186 mi) with two sidewinders and external fuel tanks

Ceilling: 41,000 ft (12,500 m)

Rate of climb: 29,000 ft/min (146 m/s)

Armament and avionics

Guns: 1 or 2 x 20 mm Colt Mk 12 cannon with 60 rounds per gun (portside gun can be removed and replaced with a refueling probe)

Hardpoints: one centerline and two underwings, plus two wingtips pylons

Bombs and missiles: up to 2,500 pounds (1,580 kg) of ordnance, including various bomb types

Radar: AN/APQ-153 fire-control radar



Multirole Aircraft

KF-201A (Formerly KF-X Design 201)

Specifications

Crew: 1

Powerplant: 2x Snecma M88KF Turbofans with 3D Thrust Vectoring

Maximum Speed: Mach 3.6 (with full internal combat load)

Maximum Supercruise Speed: Mach 2.7 (with full internal combat load)

Maximum Range: 2000+ nautical miles

Maximum Range with Conformal Tanks: 3000+ nautical miles

Service Ceiling: 65,000ft Maximum G Loading: +8/-12

Sensors: 1x Samsung/Mitsubishi Advanced AESA Radar

1x Distributed Aperture System
1x Electro Optical Targeting System

Defensive Systems: 1x Internal Towed Radar Decoy

1x Samsung Black Eye ECM System
1x Advanced Countermeasures System

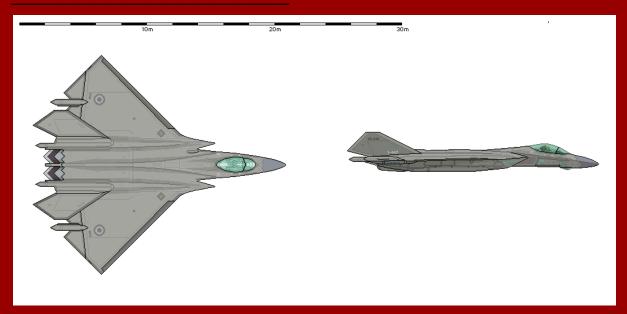
Armament: 2x Internal 27mm BK-27 Linkless Feed Cannons

1x Main Weapons Bay capable of holding 4x AAM's

2x Secondary Weapons Bays capable of holding 1x AAM each

4x Optional Wing Pylons

2x Optional Wingtip Pylons



> Name: Chaj Al-77

> Type: Fifth Generation Multirole Fighter

> General Characteristics

> Crew: 1

> Lenght: 17.87 m > Wingspan: 12.9 m > Height: 4.2 m

> Empty Weight: 17,380 kg > Gross Weight: 26,580 kg

> MTOW: 32,560 kg

> RCS Number: 0.00071 m2

> Performance:

> Powerplant: 2 × Thrust Vectored Pratt & Whitney F119-PW-100 augmented turbofans, 26,000 lbf (116 kN) thrust each dry, 35,000 lbf (156 kN) with afterburner

Maximum speed: Mach 3.28
Supercruise: Mach 1.92
Combat Range: 3,200 km
Ferry Range: 3,950 km
Service Ceiling: 17,590 km

> G-Limits: +9/-3.5 g

> Armament:

- > Guns: 1 × 27 mm Mauser BK-27 revolver cannon with 250 rounds
- > Internal Weapon Bay Hardpoints: 8
- > External Hardpoints: 4× under-wing pylon stations can be fitted to carry weapons, each with a capacity of 5,000 lb (2,270 kg) or 600 U.S. gallon (2,270 L) drop tanks
- > Avionics:

>

- > AN/APG-63(V)3 AESA Radar
- > AN/AAQ-40 Electro-Optical Targeting System
- > AN/AAQ-37 Electro-optical Distributed Aperture System missile warning system
- > AN/ASQ-239 Barracuda electronic warfare system
- > AN/ASQ-242 CNI suite, which includes;

>

- > Harris Corporation Multifunction Advanced Data Link (MADL) communication system
- > Link 16 data link
- > SINCGARS
- > An IFF interrogator and transponder
- > HAVE QUICK
- > AM, VHF, UHF AM, and UHF FM Radio
- > GUARD survival radio
- > A radar altimeter
- > An instrument landing system
- > A TACAN system
- > A JPALS
- > TADIL-J JVMF/VMF



Air Superiority Fighter

BL-77

Maximum speed: Mach 2.25, 1,800 mph (2,914 km/h) at altitude

Mach 1.21, 800 knots (921 mph; 1,482 km/h) at sea level Mach 1.82, 1,220 mph (1,963 km/h) supercruise at altitude

Range: 1,600 nmi (1,800 mi, 3,000 km) or more with 2 external fuel tanks

Combat range: 460 nmi (530 mi, 850 km) clean with 100 nmi (115 mi, 185 km) in supercruise

590 nmi (679 mi, 1,093 km) clean subsonic[N 16] Ferry range: 1,740 nmi (2,000 mi, 3,220 km)

Service ceiling: 65,000 ft (20,000 m)

g limits: +9.0/-3.0

Wing loading: 77.2 lb/sq ft (377 kg/m2)

Thrust/weight: 1.08 (1.25 with loaded weight and 50% internal fuel)

Armament

Guns: 1× 20 mm M61A2 Vulcan rotary cannon, 480 rounds

Internal weapons bays: Air-to-air mission loadout: 6x AIM-120C/D AMRAAM

2× AIM-9 Sidewinder

Air-to-ground mission loadout:

2× 1,000 lb (450 kg) JDAM or 8× 250 lb (110 kg) GBU-39 Small Diameter Bombs

2× AIM-120 AMRAAM

2× AIM-9 Sidewinder

Hardpoint (external):

4× under-wing pylon stations can be fitted to carry weapons, each with a capacity of 5,000 lb (2,270 kg) or 600 U.S. gallon (2,270 L) drop tanks[258]

4x AIM-120 AMRAAM (external)

Avionics

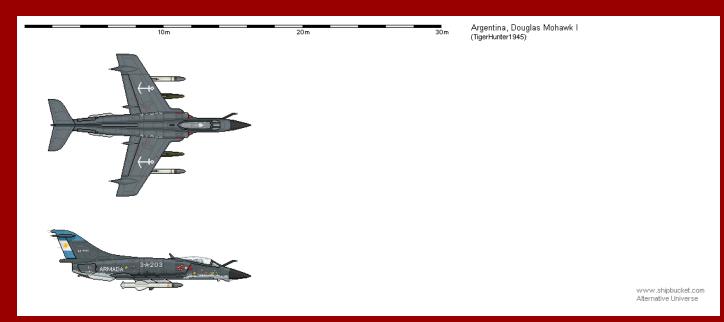
AN/APG-77 or AN/APG-77(V)1 radar: 125–150 miles (201–241 km) against 1 m2 (11 sq ft) targets (estimated range), more than 250 miles (400 km) in narrow beams

AN/AAR-56 Missile Launch Detector (MLD)

AN/ALR-94 electronic warfare system: 250 nautical miles (460 km) or more detection range for radar warning receiver (RWR)

Integrated CNI Avionics

MJU-39/40 flares for protection against IR missiles



Fighter aircraft

SL-57

General characteristics

Crew: 1 (Pilot)

Empty weight: 14,021 lb Max takeoff weight: 26,000 lb

Powerplant:

1x Rolls-Royce/MAN RB-194-14 plenum chamber burning vectored thrust engine (94 kN dry,

125 kN with PCB)

1x Rolls-Royce RB-162-87F lift jet (25 kN)

Performance

Max speed: 2650km/h Service ceiling: 15,200 m

Combat range: 680 km (no droptanks) Ferry range: 3,610 km (with droptanks)

Armament:

2x 27mm BK-271K autocannons

6x Hardpoints:

4 heavy pylons for:

Droptank

Kormoran AShM AS.30L AGM A variety of bombs SNEB rockets AIM-9 Sidewinder 2 light outer pylons for: AIM-9 Sidewinder



Reconnaissance Aircraft

RC-5

Performance

Cruise speed: Mach 5 at 72,000 ft (22,000 m) Range: 6,090 nmi (7,010 mi, 11,280 km) plus

Endurance: 12 hours

Service ceiling: 80,000 ft (24,000 m) plus

Rate of climb: 9,000 ft/min (46 m/s)

Time to altitude: 60,000 ft (18,000 m) in 12 minutes 30 seconds

Lift-to-drag: 25.6

Wing loading: 40 lb/sq ft (200 kg/m2)

Thrust/weight: 0.425

Fuel consumption: 910 lb/h) in cruise



Bomber Aircraft

M-7M

Crew: 2: pilot (left seat) and mission commander (right seat)

Length: 69 ft 0 in (21.0 m)
Wingspan: 172 ft 0 in (52.4 m)
Height: 17 ft 0 in (5.18 m)

Wing area: 5,140 sq ft (478 m2)
Empty weight: 158,000 lb (71,700 kg)
Gross weight: 336,500 lb (152,200 kg)
Max takeoff weight: 376,000 lb (170,600 kg)
Fuel capacity: 167,000 pounds (75,750 kg)

Maximum speed: 2600 km/h, 550 kn at 40,000 ft (12,000 m) altitude / Mach 0.95 at sea

level[165]

Cruise speed: 560 mph (900 km/h, 487 kn) at 40,000 ft (12,000 m) altitude

Range: 6,900 mi (11,000 km, 6,000 nmi) Service ceiling: 50,000 ft (15,200 m) Wing loading: 67.3 lb/sq ft (329 kg/m2)

Thrust/weight: 0.205

2 internal bays for ordnance and payload with an official limit of 40,000 lb (18,000 kg); maximum

estimated limit is 50,000 lb (23,000 kg)

80× 500 lb (230 kg) class bombs (Mk-82, GBU-38) mounted on Bomb Rack Assembly (BRA)

36× 750 lb (340 kg) CBU class bombs on BRA

16× 2,000 lb (910 kg) class bombs (Mk-84, GBU-31) mounted on Rotary Launcher Assembly (RLA)

Standoff weapon: AGM-154 Joint Standoff Weapon (JSOW) and AGM-158 Joint Air-to-Surface

Standoff Missile (JASSM)

2× GBU-57 Massive Ordnance Penetrator



Close Air Support

P-I 3

Performance

Maximum speed: 721 kn (830 mph, 1,335 km/h) at 40,000 ft (12,000 m), 608 kn (1,126 km/h) at

200–500 ft (61–152 m) Maximum speed: Mach 1.25

Range: 5,100 nmi (5,900 mi, 9,400 km) with weapon load of 37,000 lb (16,800 kg). Max range is

6,500 nmi (12,000 km).[168]

Combat range: 2,993 nmi (3,444 mi, 5,543 km)

Service ceiling: 60,000 ft (18,000 m)
Rate of climb: 5,678 ft/min (28.84 m/s)
Wing loading: 167 lb/sq ft (820 kg/m2)
Thrust/weight: 0.38 at gross weight

Armament

Hardpoints: 6 external hardpoints for ordnance[c] with a capacity of 50,000 pounds (23,000 kg), with provisions to carry combinations of:

Bombs:

Mk-82 air inflatable retarder (AIR) general purpose (GP) bombs

Mk-82 low drag general purpose (LDGP) bombs

Mk-84 general-purpose bombs

CBU-87/89/CBU-97 Cluster Bomb Units (CBU)

CBU-103/104/105 Wind Corrected Munitions Dispenser (WCMD) CBUs

GBU-31 JDAM GPS guided bombs (Mk-84 GP or BLU-109 warhead)

GBU-38 JDAM GPS guided bombs (Mk-82 GP warhead)

GBU-38 JDAM (using rotary launcher mounted multiple ejector racks)

GBU-54 LaserJDAM (using rotary launcher mounted multiple ejector racks)

GBU-39 Small Diameter Bomb GPS guided bombs (not fielded on B-1 yet)

AGM-154 Joint Standoff Weapon (JSOW)

AGM-158C Long Range Anti-Ship Missile (LRASM)

AGM-158 Joint Air to Surface Standoff Missile (JASSM)

AGM-183 Air-Launched Rapid Response Weapon (ARRW)

Previously B61 or B83 nuclear bombs could be carried

Bombs: 3 internal bomb bays for 75,000 pounds (34,000 kg) of ordnance.

Avionics

- 1× AN/APQ-164 forward-looking offensive passive electronically scanned array radar
- 1× AN/ALQ-161 radar warning receiver and defensive jamming equipment
- 1× AN/ASQ-184 defensive management system
- 1× Sniper Advanced Targeting Pod (optional)



Military Drones

DRO-7

Crew: 0 onboard 2 in ground station

Length: 36 ft 1 in (11 m) Wingspan: 65 ft 7 in (20 m) Height: 12 ft 6 in (3.81 m)

Empty weight: 4,901 lb (2,223 kg)
Max takeoff weight: 10,494 lb (4,760 kg)

Fuel capacity: 4,000 lb (1,800 kg) Payload: 3,800 lb (1,700 kg) Internal: 800 lb (360 kg) External: 3,000 lb (1,400 kg)

Powerplant: 1 × Honeywell TPE331-10 turboprop, 900 hp (671 kW) with Digital Electronic

Engine Control (DEEC)

Performance

Maximum speed: 300 mph (482 km/h, 260 kn) Cruise speed: 194 mph (313 km/h, 169 kn) [226]

Range: 1,200 mi (1,900 km, 1,000 nmi) Endurance: 14 hours fully loaded Service ceiling: 50,000 ft (15,420 m) Operational altitude: 25,000 ft (7.5 km)

Armament 7 hardpoints

Up to 1,500 lb (680 kg) on the two inboard weapons stations

Up to 750 lb (340 kg) on the two middle stations Up to 150 lb (68 kg) on the outboard stations

Center station not used

Up to four AGM-114 Hellfire air to ground missiles can be carried or four Hellfire missiles and two 500 lb (230 kg) GBU-12 Paveway II laser-guided bombs. The 500 lb (230 kg) GBU-38 Joint Direct Attack Munition (JDAM) can also be carried. Testing is underway[needs update] to support the operation of the Air-to-Air Stinger (ATAS). In March 2014, MBDA successfully test fired a dual mode Brimstone missile from a Reaper aircraft on behalf of the UK Ministry of Defence and Royal Air Force. Depending on mission requirements, the MQ-9 Reaper can carry multiple AIM-9X Block 2 missiles.

Avionics

AN/DAS-1 MTS-B Multi-Spectral Targeting System

AN/APY-8 Lynx II radar

Raytheon SeaVue Marine Search Radar (Guardian variants)



Military Drone

MQ-57 Manta Multi-Role Combat UCAV

Specifications (MQ-57B):

Crew: None (Optional Pilot in Control Console)

Maximum Speed: Mach 1.46

Engines: 1x F119 Turbofan Engine with 3D Thrust Vectoring

Maximum Range: 1500+ miles Combat Radius: 900 miles Service Ceiling: 65,000ft Maximum G Loading: +21/-20

Armament: 1x External 20mm A50 Rotary Cannon with 450 rounds

2x External Weapons Pylons that can carry either 2x AIM-9X Sidewinder AAM's or 2x

AGM-114M Hellfire ATGM's

Description:

First designed in 2019, this highly maneuverable drone fighter was first designed in response to a request from the RoUK Air Force. The specification specifically required that it be unmanned, as to not waste fighter pilots, who were in short supply. With a population of only 80 million people and only so many rolls of the genetic dice, the specific abilities that make people natural fighter pilots were difficult to come by in the RoUK. After much consideration, the RoUK decided to become the first military to use a UCAV in an air combat role. After a competition lasting a year, the KAI Manta was selected. With a 360 degree camera system and millimeter wave radar system, the Manta is able to turn and burn with the best fighter pilots, all without requiring human input. The design was named MQ-57A and put into general production.

The Manta is commonly used in local interception/air defense and close escort roles. It is able to fly autonomously and can be programmed to engage any aircraft that enters a preprogrammed range around the aircraft that doesn't have a friendly IFF. With a light armament of only two AAM's and a Cannon, it is specially designed for what fighter pilots refer to as a knife fight. Thanks to its high strength structure and lack of a pilot, it can perform maneuvers that would cause a regular pilot to black out instantly. It can be directly controlled by a pilot in a cockpit like command center, but this is am uncommon practice. The B model introduced a limited close support capability with the addition of the ability to carry and fire 2 Hellfire AGMs. The B model is often used for Suppression of Enemy Air Defenses (SEAD) missions.



Drone EG-53
Specifications

Physical Measures

- Length: 6.8 metres- Wingspan: 12.5 metres- Height: 2.1 metres- Empty Weight: 950 kg

- Maximum Takeoff Weight: 2,200 kg

Performance

- Cruise Speed: 280 km/h- Maximum Speed: 500 km/h

- Range: 1,800 km

Service Ceiling: 8,500 metres

Endurance: 36 hours

Powerplant

- Motor type: Single, electric turbofan engine

- Power: 100 kW

Armament

- Capacity: 120 kg internal payload

Hardpoints: 12, each capable of carrying a range of precision-guided munitions

Weapons:

- Air-to-ground missiles (6x)

- Guided bombs (6x)

Avionics & Systems

- Advanced Synthetic Aperture Radar for all-weather, day/night time surveillance
- High-resolution Electro-optical/Infrared (EO/IR) camera system with laser designator
- Secure satellite communication system
- Automatic Takeoff and Landing System (ATLS)
- Advanced mission planning system

Software & Al

- Autonomous flight and mission execution capabilities
- Target recognition and prioritization A
- System self-diagnostics and reporting
- Automated Return-To-Base (RTB) in the event of a communication failure



Multirole Fighter

K-L55

Crew: 1

Length: 51.4 ft (15.7 m) Wingspan: 35 ft (11 m) Height: 14.4 ft (4.4 m)

Wing area: 460 sq ft (43 m2)

Aspect ratio: 2.66

Empty weight: 29,300 lb (13,290 kg)
Gross weight: 49,540 lb (22,471 kg)
Max takeoff weight: 65,918 lb (29,900 kg)
Maximum speed: Mach 2.2 at altitude
Range: 1,500 nmi (1,700 mi, 2,800 km)

Combat range: 669 nmi (770 mi, 1,239 km) on internal fuel

760 nmi (870 mi; 1,410 km) interdiction mission on internal fuel, for internal air to air

configuration

Service ceiling: 50,000 ft (15,000 m)

g limits: +9.0

Wing loading: 107.7 lb/sq ft (526 kg/m2) at gross weight

Thrust/weight: 0.87 at gross weight (1.07 at loaded weight with 50% internal fuel)

Armament

Guns: 1 × 25 mm (0.984 in) GAU-22/A 4-barrel rotary cannon, 180 rounds[N 16]

Hardpoints: 4 × internal stations, 6 × external stations on wings with a capacity of 5,700 pounds (2,600 kg) internal, 15,000 pounds (6,800 kg) external, 18,000 pounds (8,200 kg) total weapons payload, with provisions to carry combinations of:

Missiles:

Air-to-air missiles

AIM-9X Sidewinder AIM-120 AMRAAM

AIM-132 ASRAAM

MBDA Meteor (Block 4, for F-35B)

Air-to-surface missiles:

AGM-88G AARGM-ER (Block 4)

AGM-158 JASSM

SPEAR 3 (Block 4, in development, integration contracted)

Joint Air-to-Ground Missile (JAGM)

Air-to-surface/Anti-ship missiles

Joint Strike Missile (JSM, integration in progress)

Anti-ship missiles

AGM-158C LRASM (being integrated)

Bombs:

Joint Direct Attack Munition (JDAM) series

Paveway series laser-guided bombs

Precision-guided glide bomb:

AGM-154 JSOW

GBU-39 Small Diameter Bomb (SDB)

GBU-53/B StormBreaker (Small Diameter Bomb II)

B61 mod 12 nuclear bomb (being certified)

Avionics

AN/APG-81 AESA radar

AN/AAQ-40 E/O Targeting System (EOTS)

AN/AAQ-37 Distributed Aperture System (DAS) missile warning system

AN/ASQ-239 Barracuda electronic warfare system

AN/ASQ-242 CNI suite, which includes

Harris Corporation Multifunction Advanced Data Link (MADL) communication system

Link 16 data link

SINCGARS

An IFF interrogator and transponder

HAVE QUICK

AM, VHF, UHF AM, and UHF FM Radio

GUARD survival radio

A radar altimeter

An instrument landing system

A TACAN system

Instrument carrier landing system

A JPALS

TADII -.I .IVMF//MF



KM-5

Role: Swing Wing Air Superiority Fighter

In service: 1983-20XX

Dimensions 17.2 Meters (L), 4 Meters (H), Wingspan (W), Full Sweep (FSW)

Empty Weight: 35,000 lb (15,875 kg)

Powerplant: 2 × Klimov RD-33 Afterburning Turbofan Engines

Speed: Mach 2.4

Combat Radius: 1,500 KM (930 Mi, 800 Nmi)

Armament: 14 Hardpoints (x2 Wingtips, x8 under-wing, x4 under, fuselage)

x120 mm (0.787 in) M61A1 Vulcan

Crew: 1 (Pilot)



Specifications

In service: 1985-today

Powerplant: 1x General Electric J79-GE-119 turbojet, 18.7k lbf at sea

level with Combat Plus activated

Speed: Mach 2 (2469km/h) maximum

Range: Undisclosed, but known to be inferior to the standard

F-16A/B

Armament: 1x 20mm cannon, with payload of up to 6803kg in the wings

or under the fuselage

Crew: 1 (pilot)



Interceptor Aircraft

NK-9A

Performance

Maximum speed: Mach 2.25, 1,600 mph (2,614 km/h) at altitude

Mach 1.21, 800 knots (921 mph; 1,482 km/h) at sea level Mach 1.82, 1,220 mph (1,963 km/h) supercruise at altitude

Range: 1,600 nmi (1,800 mi, 3,000 km) or more with 2 external fuel tanks

Combat range: 460 nmi (530 mi, 850 km) clean with 100 nmi (115 mi, 185 km) in supercruise

590 nmi (679 mi, 1,093 km) clean subsonic[N 14] Ferry range: 1,740 nmi (2,000 mi, 3,220 km)

Service ceiling: 65,000 ft (20,000 m)

g limits: +9.0/-3.0

Wing loading: 77.2 lb/sq ft (377 kg/m2)

Thrust/weight: 1.08 (1.25 with loaded weight and 50% internal fuel)

Armament

Guns: 1× 20 mm M61A2 Vulcan rotary cannon, 480 rounds

Internal weapons bays: Air-to-air mission loadout: 6x AIM-120C/D AMRAAN

2× AIM-9 Sidewinder

Air-to-ground mission loadout:

2× 1,000 lb (450 kg) JDAM or 8× 250 lb (110 kg) GBU-39 Small Diameter Bombs

2× AIM-120 AMRAAM 2× AIM-9 Sidewinder

Hardpoint (external):

4× under-wing pylon stations can be fitted to carry weapons, each with a capacity of 5,000 lb

(2,270 kg) or 600 U.S. gallon (2,270 L) drop tanks

4x AIM-120 AMRAAM (external)

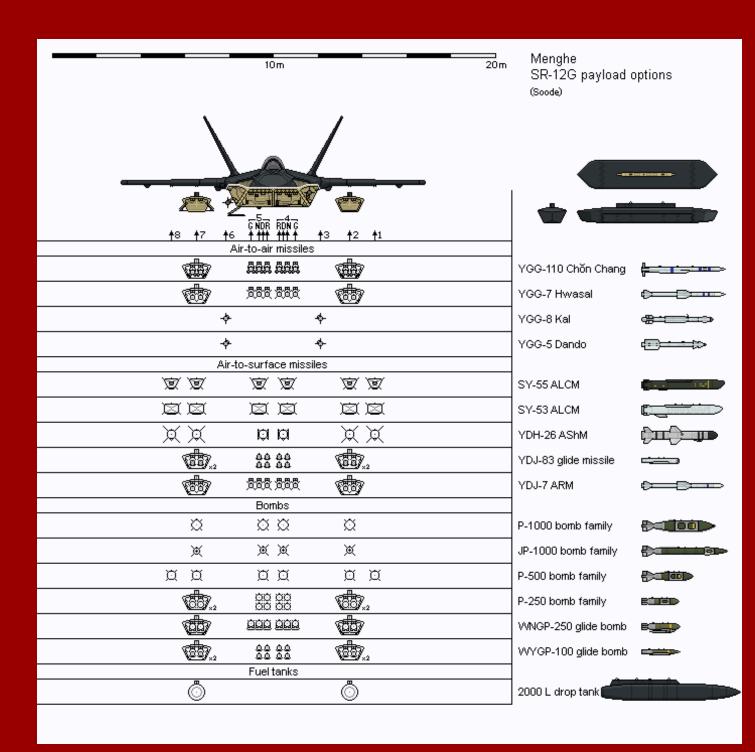
Avionics

AN/APG-77 or AN/APG-77(V)1 radar: 125–150 miles (201–241 km) against 1 m2 (11 sq ft) targets (estimated range), more than 250 miles (400 km) in narrow beams AN/AAR-56 Missile Launch Detector (MLD)

AN/ALR-94 electronic warfare system: 250 nautical miles (460 km) or more detection range for radar warning receiver (RWR)

Integrated CNI Avionics

MJU-39/40 flares for protection against IR missiles.



Fighter Aircraft

The Songrim SR-12 (Formal designation: 송림 12호 전투기 / 松林十二號戰鬪機, Songrim Sibi-ho Jŏntugi, "Songrim No.12 Fighter;" Short designation 송림-12 Songrim-Sibi "Songrim-12") is an all-weather twinjet fifth-generation jet fighter developed in Menghe by the Songrim Aircraft

Corporation. It is designed as a multirole combat aircraft capable of taking on both air superiority and precision ground attack roles.

After a long development project spanning the 2000s, the SR-12 made its first flight in May 2015, and was first publicly unveiled at the 2019 Victory Day celebration. As of March 2021, roughly a dozen production-model SR-12 airframes are in service with a training and evaluation squadron, but no deliveries to combat-ready units have been made, and initial operating capability is scheduled for 2024. This development and evaluation timeline, unusually slow by Menghean standards, may be part of an effort to iron out safety issues and stealth compromises before deploying the plane to front-line bases.

Tl:dr of stealth realism

Planform alignment: Leading edges at 45 degrees, trailing edges at 8 degrees, side surfaces at 60 degrees.

Intakes: Diverterless supersonic intakes with S-bend internal channels.

Sawtooth panel lines: Yes, at 45 degrees.

Supercruise capability: Pending. Domestic high-power turbojets are in development but unreliable, so early production models use existing engine models and are not supercruise capable.

Supermaneuverability: Production model has 2D thrust vectoring, including thrust-vectored rolls achieved by vectoring in opposing directions. Thrust-to-weight ratio is 1.02 on full internal fuel, disappointing but also pending the introduction of more powerful engines on later variants. Built-in air-to-ground capability: Optics and laser unit under the nose eliminates the need for an external targeting pod.

Radar: Phased array set with low-RCS antenna, reduced probability of intercept via frequency hopping, track-while-scan capability, and active ECM capability.

Sensor fusion: Radar augmented by active radar MAWS (four antennas), infrared MAWS (six lenses), and forward-looking IRST (above and below nose). Pilot has a helmet-mounted display as well as a conventional HUD. Lower cockpit uses multifunction LED displays.

Development

Preliminary work

The Songrim Aircraft Corporation began preliminary work on a stealth fighter some time around 1999 or 2000, producing a series of conceptual sketches under the designation "JG-S." Most of this work was done under the leadership of Han Mun-su, a talented designer and advocate of stealth aircraft.

Challenges

Even with consistent state support, Songrim's JG-S project met repeated delays due to the plane's technological complexity. The engineers struggled with radar-absorbent materials and configurations, which were at the cutting edge of even the leading military powers' research. As the JG-S project was a state secret, Songrim was also unable to seek input from engineers in Dayashina and Tír Glas, which closely guarded their own stealth aircraft projects.

These problems were compounded by gradual mission creep. As the years passed, the "fifth-generation" requirement was expanded to include a new sensor suite and electronic warfare system, demanding requirements that called for new electronics and lengthy computer code. While the initial design was purely conceived of as an air superiority fighter, the MoND later insisted on organic ground-attack capability, including the ability to carry 1000-kilogram guided bombs.

Other delays stemmed from the engines: initially Songrim opted to use an up-rated version of the Donghae Type 74 turbojet, itself a licensed TF-530, but the increasingly heavy airframe cancelled out the gains from higher wet thrust, and left the plane slower at dry military power. Development of a supercruise-capable engine encountered repeated delays, as the high temperatures and pressures required very durable turbine blades.

Testing

The first test flight with a JG-S prototype took place on May 4th, 2015, and lasted for a total of 25 minutes. No announcements about the test were made, and no photographs were released. After several months of work on avionics, a second, 90-minute flight took place on August 12th. This time, photographs specially approved by the Ministry of National Defense were released to the press, though the images were of poor quality and the announcements that accompanied them said little about the plane's characteristics.

A thin stream of vague but confident reports on JG-S progress continued until early 2016, when the MoND abruptly stopped releasing any information about the new stealth fighter program. Around the same time, online censors began targeting any online or press discussion of the plane's status. Analysts abroad speculated that the program had been cancelled, or that the design team had been purged; only in late 2019 was it confirmed via a leaked document that the second prototype had crashed after one of its experimental Donghae Type 110 engines exploded mid-flight, killing the pilot and destroying the plane.

After the crash, development proceeded more slowly, at the cost of additional delays. The third prototype carried Glasic engines of the same type used on recent lolar models, imported and later licensed for the SR-8, with more thrust than the first prototype's Type 74 but less than the experimental Type 110. There were also rumors, still unconfirmed, of problems with the fly-by-wire system, the radar, and the lengthy programming tying together the sensor suite.

New images of the fighter were released in early December 2017, ending a year and a half of closely enforced silence, though detailed information remained scarce. A few months later in May, a scale model of the aircraft appeared at a tech expo celebrating the 30th anniversary of Menghe's opening-up and reform, giving visitors the first all-round view of the new aircraft. The model also bore the designation SR-12, a sign that it had been accepted for service, and included a brief description of its capabilities.

The SR-12 made its first public appearance on July 27th, 2019, with three aircraft flying over Donggwangsan during a military parade celebrating the 55th anniversary of Menghe's victory in the War of Liberation. During this overflight display, the parade announcer stated that the SR-12 had been accepted for service and was ready for low rate initial production, with deliveries of production airframes expected to take place the following year. In the months that followed the parade reveal, the Ministry of Defense also began publishing more detailed information on the SR-12's features and capabilities, painting a more thorough, if possibly optimistic, picture of Menghe's first fifth-generation fighter.

Introduction and evaluation

Despite these optimistic announcements, the SR-12 has not yet been delivered to combat units A separate press release issued in January 2020 stated that the fighter would reach initial operating capability in 2023.

The first production-model SR-12 made its first flight on March 3rd, 2020. While the previous two aircraft were workshop-built units, these units were internally and structurally identical to later production units. After the Menghean Ministry of National Defense released photos of the taxi runs and test flights, observers noticed a number of differences between the production models and the prototypes unveiled in December 2017 and July 2019:

The side missile bays had single rather than double doors.

The doors of the landing gear compartments were enlarged

The leading-edge wing flaps were made of a different material

The underside of the nose was more squared-off and less rounded

Attachment points for under-wing pylons were added

Forward radar warning receivers were moved from the sides of the nose to the sides of the intakes

Production-model aircraft made another appearance at the Songrimsŏng airshow and defense exposition in February 2021. This airshow included the first clear images of the SR-12's open weapons bays, previously distinguishable only from panel lines. The centerline weapons bay was shown with six YGG-7 Hwasal missiles, with the center missile on each side offset forward to clear the space around the fins. This in-flight missile display also revealed the reasoning behind the shift from two-panel to single-panel side bays: the SR-12 can extend an arm carrying an air-to-air missile on a launch rail outside the weapons bay, then close the door behind it, blocking radar reflections from the inside of the weapons bay while allowing the exposed missile to acquire a target's infrared signature. Small notches in the weapons bay door, normally covered by small panels, leave space for the struts connecting the launch rail to the airframe inside.

Better-quality photographs from the 2021 airshow also confirmed that the production-mode SR-12 eliminated some panel lines and structural rivets that independent analysts had previously identified as flaws in the prototype's stealthiness.

Currently (as of March 2021), it is believed that roughly a dozen production-model SR-12s are undergoing initial operational testing and evaluation (IOT&E) at a remote site in northern Menghe. The base's distance from the front line, along with the duration of testing, suggests that the Menghean Armed Forces are adopting an unusually cautious approach to the SR-12's late development process, possibly a response to the loss of a prototype in early 2016. Photos and press releases, while drumming up attention about the SR-12, have been deliberately vague about its performance characteristics, and observers from Menghe's closest allies have been denied access to the test site. A press release in January 2021 stated that the projected deadline for IOC had been moved back from 2023 to 2024, which would put the total length of the development program at close to 25 years.

Foreign assistance

The relatively early appearance of the first JG-S prototype - just a year after Septentrion's first fifth-generation fighters entered operational service - fed extensive speculation about whether Menghe had imported most of the jet's technology from abroad. Tír Glas, Dayashina, and Hallia, all participants in the Huntress fighter jet project, had licensed military electronics to Menghe in the past.

A spokesperson for Glasic International Aircraft confirmed in 2017 that GIA had shared certain dual-use technologies, including carbon fiber aircraft skin and titanium alloys, with Menghean companies, but also stated that this was part of a previously negotiated technology transfer deal negotiated before the existence of JG-S was known. GIA denied sharing any information on radiation-absorbent material, or on the principles of stealthy airframe design. Representatives of Dayashinese and Hallian aerospace contractors have also denied turning over sensitive or classified information, including radar and passive sensor designs. Some less sensitive components, including the autocannon and the production-model engines, are known to be built under license, but were approved for export in relation to earlier Albanian combat aircraft.

For its part, the Asalbanian Ministry of National Defense insists that the aircraft is "fundamentally domestic in design," though it acknowledges building on undisclosed "state-of-the-art materials and principles." The radar-absorbent material is purportedly entirely indigenous, and may be related to radar-absorbent composites used on the SR-8R and the DS-9D/R, which are also purportedly indigenous.

Design

Layout

Compared to most of Septentrion's other fifth-generation fighter programs, which incorporated lambda wings, diamond wings, and canards, the SR-12 follows a rather conservative tailed delta layout, reminiscent of Songrim's SR-8. Letnia's MiG-55 follows a similar configuration. Some defense analysts have speculated that the SR-12's conventional design may compromise its radar cross-section, with one calling it a "display-only stealth fighter." Others have presented

more cautious assessments, noting that it displays good planform alignment and has other RCS-reducing features.

The SR-12 is also the largest and heaviest of Septentrion's three service-ready fifth-generation fighters, a characteristic which became apparent as soon as the first taxiing photographs were released. In conjunction with a proportionally larger wing area, this gives it a longer range, a heavier payload, a larger bomb bay, and more space for supplemental radar antennas. Like the SR-8, it may be intended as a "high-cost, high-capability" fighter, which will pair with a mass-produced "low-cost, low-capability" design; but Daesŭngri's DS-13 fifth-generation program has yet to produce a flying prototype, so the SR-12 may instead be complemented by reduced-RCS variants of the SR-8 and DS-9.

Performance

The production-ready model of the SR-12 appears to use the Donghae Type 89/160 turbofan, which Menghe licensed from Tír Glas for the "R" variant of the Songrim SR-8 in 2017. The engine nozzles, also adapted from the SR-8R, incorporate two-dimensional thrust vectoring for increased maneuverability and thrust reversal for shorter landing distances.

While the SR-8R is supercruise-capable and has an excellent thrust-to-weight ratio, the SR-12 is larger and heavier despite having the same power. State sources have not released any information on its top speed using maximum military power, but independent estimates suggest that it should be incapable of supercruise. This means that in order to cruise at supersonic speeds, the SR-12 must rely on reheating, which greatly increases fuel consumption and leaves a larger infrared signature.

Diverterless supersonic intakes on either side of the fuselage eliminate the need for heavy variable-geometry intakes, which could compromise frontal stealth. The airflow from the intakes is also piped up through the back of the fuselage through S-shaped conduits, such that the radar-reflective turbine blades are not visible from in front of the aircraft. Jagged panels on top of the fuselage allow the aircraft to bleed out excess intake airflow; some defense analysts have speculated that these panels could be reversed to serve as auxiliary intakes during rough-field landings, but their position would supply very little positive air pressure.

Background footage from a factory inspection in 2020 shows that a panel on the right side of the cockpit conceals a retractable refueling probe, which would allow the SR-12 to further extend its range on long-distance ferry flights or over-sea strike missions. Footage of a pre-production model taxxing at an airbase, released later that year, confirmed the probe's presence.

Sensors and electronics

The SR-12 has six infrared-spectrum cameras distributed around the fuselage to provide 360-degree detection and imaging. Conceptually, the array is reminiscent of the Dayashinese AN/AAQ-37, though Menghean sources claim that the cameras and their network are of domestic design. If functionality is similar between the two systems, these cameras will allow the

SR-12 to detect aerial targets, ground vehicles, and missile launches in all directions, improving the pilot's situational awareness.

These are supplemented by passive radar antennas in the wings and vertical stabilizers, which can pick up on emissions from aircraft, missiles, and ground installations, cross-referencing these with infrared signals to eliminate false positives.

The nose contains an advanced AESA radar of domestic design and construction. In addition to reducing radar reflections, the scanned-array layout allows the radar to simultaneously form multiple target-tracking beams over a wide area while also scanning the full sky or regions of interest. Beams can also be pointed at returns from passive detection, allowing target tracking with minimal emissions or focused tracking of low-RCS targets. State sources report that the radar is immune to jamming and passive detection, which likely indicates the use of high-rate, pseudo-random frequency hopping, and it is possible that it incorporates a built-in high-powered jamming capability.

An angular glass aperture underneath the nose reportedly contains an electro-optical targeting system with a high-resolution infrared camera and a laser designator. This eliminates the need for an external targeting pod like Maenun, which would increase drag and radar returns. A large infrared aperture above the nose likely contains an IRST system for passively identifying airborne targets.

Cockpit and avionics

A mock-up training cockpit revealed to expo visitors in 2020 shows a large multi-function LCD screen in the center and a narrower display centered beneath it. The absence of screen-side buttons has led some observers to speculate that the displays may be touchscreens, or more reliant on HOTAS controls. The glass cockpit layout is even more thorough than that on the SR-8 and DS-9, which still retained some analog or steam dials, though the training cockpit also appears to omit some functions and may not fully represent the production fighter's avionics. Some non-combat functions can be activated by voice command, a feature also present on late-model DS-9s.

Interestingly, the control column appears to be located on the right side of the cockpit, even though all previous Menghean fighter aircraft used a centre stick layout. The reason for this change is unclear; it may be intended to free up more space ahead for display screens. So far there have been no reports that the Menghean Army will order DS-10 trainers with the side-stick layout.

The SR-12 is fully integrated with the joint-developed Keikō helmet-mounted display, which projects sensor information into the pilot's field of view and allows off-boresight targeting of certain missiles. Unlike the Huntress, it retains a full-function reflective head-up display centered in front of the pilot, indicating that Menghean designers did not opt for increased reliance on the helmet-mounted display.

The aircraft's canopy is reportedly made of an advanced composite material which reduces high-temperature strain and absorbs radar emissions which could otherwise reflect off of the pilot or cockpit instruments. The first prototype had a clear canopy, but on the production-ready parade variants it appeared slightly purple or gray.

Armament

Photos of the first prototype surprised many observers due to the apparent absence of a gun port. Nor was any mention of gun armament made in official press releases. The mockup displayed in May 2018 also contained no visible gun port. The parade reveal the following year mentioned a single 6-barrel 24mm cannon, which careful observers eventually traced to a small panel under the right wing root; when retracted, this allows the gun to fire, but the rest of the time it remains flush with the plane's skin to reduce drag and radar returns.

Other armament is carried in three internal weapons bays. One, centered under the fuselage, has space for six YGG-7 Hwasal missiles, in a clipped-fin variant. The missiles are slightly staggered to fit closer together, and they are mounted on special ejector arms that propel them free of the bay before the rocket motor fires. State sources also claim that some of the launch arms can be replaced with hardpoints for bombs of up to 1,000 kilograms, though there is still speculation about how this is accomplished spatially. Two more weapons bays, one on each side of the fuselage behind the intakes, carry short-range infrared-guided missiles. There are two attachments for pylons under each wing, allowing mounting of even more missiles or bombs, but because these positions compromise the plane's stealth they are mainly used to carry fuel tanks on ferry missions.

A placard displayed at the February 2021 Songrimsŏng airshow unveiled additional information about the SR-12's payload management system, and provided a list of weapons that were being tested on the aircraft. In addition to air-to-air missiles, the SR-12 will be able to carry medium-range cruise missiles, guided bombs, and anti-radiation missiles. These options will make it effective in the air-to-ground role. Also on display was a scale model of a stealthy weapons pod, capable of carrying two long missiles, two 250kg guided glide bombs, or four 125kg WYGP-100 Saehorigi light bombs.

Stealth

No official figures on the SR-12's radar cross section have been published, and no signatures from foreign defense radars are available. Pre-production models, such as those filmed during the July 2019 parade, all carry radar reflector pods under the fuselage to increase their returns for safety in air traffic control and navigation, and possibly to hide their true radar signature from independent measurement. The exact composition or distribution of its radiation-absorbent materials is also not publicly known, though the production-ready units appeared to have a different coating on the wing edges and over some panel seals.

Nevertheless, independent assessments of the SR-12's shape and composite 3D models pieced together from camera and movie footage have turned up few prominent flaws in the RCS-reduction scheme. The design displays very consistent planform alignment and has few clear bumps, curves, or other irregularities which could present radar reflections from the side or beneath.

No independent estimates are available on infrared signature, as the composites used in the wing leading edges and other high-strain areas are not known. If the leading-edge extensions use active cooling, as some speculate, this could dramatically reduce head-on IR signature; on the other hand, if the engines must enter reheat for dogfighting or supersonic flight, this would greatly increase the plane's infrared signature from the rear and heat up the rear fuselage.

Operational service

As of March 2021, low-rate initial production of early-model SR-12s is believed to be well underway. It is estimated that there are four flyable prototypes currently in existence, three of them in a production-ready configuration, and one of the original five lost in a crash. Independent estimates put the number of production-model SR-12s, also designated SR-12G at twelve airframes.

The Ministry of National Defense announced in 2020 that the SR-12 is on track to reach initial operating capability by 2024; until then, LRIP models will be used in training, endurance testing, and weapon qualification. Given the pace of the program until now, it is likely that further delays will push back IOC even further.

So far, there has been no discussion of exporting the SR-12, even to close allies like Argentstan. The Ministry of National Defense considers the plane's technology and capabilities sensitive, and has also denied observers from Tír Glas and Dayashina access to test airframes. Additionally, given its size and technical complexity, the SR-12 probably comes with a high price tag; the MoND shows no sign of ending production of the cheaper DS-9 and SR-8.

Specifications

General characteristics

Crew: 1

Length: 20.2 m (66 ft 3 in) Wingspan: 13.8 m (45 ft 3 in) Height: 5.2 m (17 ft 1 in) Wing area: 73.5 m2 (791 ft2)

Empty weight: 20,000 kg (44,000 lb) Loaded weight: 32,000 kg (70,000 lb) Max. takeoff weight: 38,000 kg (84,000 lb)

Powerplant: 2 × Donghae 89/160 afterburning turbojet

Dry thrust: 89 kN (20,000 lbf) each

Thrust with afterburner: 160 kN (36,000 lbf) each

Performance

Maximum speed: Mach 3+ (est.) Cruise speed: Mach 1.5 (est.)

Combat radius: 1,200 km (745 miles) on internal fuel, 8 missiles Ferry range: 4,000 km (2,500 miles) with three external tanks

Service ceiling: 20,000 m (66,000 ft) Wing loading: 435 kg/m2 (88.5 lb/ft2) Thrust/weight: 1.02 (full internal fuel)

Armament

Guns: 1× GP-24/6 revolver cannon, 220 rounds

Hardpoints: 8 internal (6 central, 1 per side) and 6 external (3 per wing) with a capacity of 6,000

kg and provisions to carry combinations of:

Missiles:
Air-to-air:

YGG-110 Chon Chang

YGG-7 Hwasal

YGG-8 Kal

YGG-5 Dando

Air-to-ground:

SY-53 Pok-u

SY-55 Kkamagwi

YDH-26

YDJ-83 Bidulgi

YDJ-7N

Bombs:

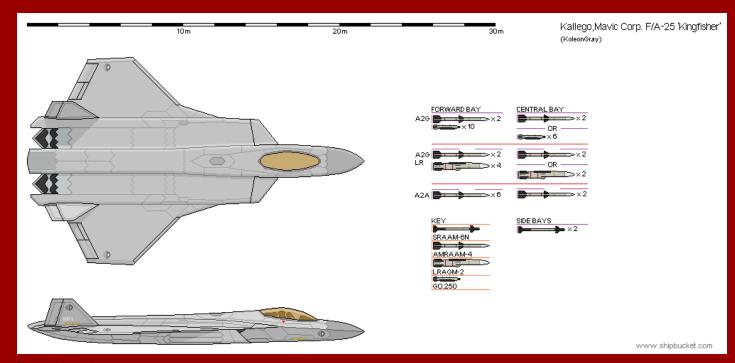
P-1000 bomb family

JP-1000 bomb family

P-500 bomb family (without glide kit)

P-250 bomb family (with or without glide kit)

WYGP-100 Saehorigi



Stealth Fighter

The F/A-25 Kingfisher is a large delta winged multi-role stealth aircraft. The aircraft is powered by two afterburning turbofans, provided by the United Turbine Corporation, with thrust vectoring nozzles attached to the exhaust to improve the maneuverability of the aircraft. However the aircraft was not designed to, and is highly recommended to avoid dog-fighting. Instead the aircraft was primarily designed to sit beyond the visual range of a target and fire missiles at it, before relocating and re-engaging before it can be spotted, officially known as "shoot'n'scoot tactics". As part of the design brief, the Kingfisher can perform this for both air and ground targets, as it's central weapons bays can hold several cruise missiles and medium range air-to-air missiles, however most ground attack missions have used the GO.250 glide bomb for close air support. As such the aircraft gained the nicknames "The Arsenal Brick", and "The SPAMRAAMer". Development was fairly smooth until mid way through flight tests, when an unknown aircraft flew within visual range of the aircraft. The Kingfisher was called to land back at it's test base, and aircraft were scrambled to intercept only to discover that the bright green seaplane, as described by the Kingfisher test pilot, had vanished from the airspace, last seen heading towards Kallego's southern neighbour, Ameti, who deny any involvement in the incident. Soon after images of the Kingfisher in testing found their way online, and the program which had been working in some modicum of secrecy, had the public eye on it once again, which the Kallegian MoD had come to despise as it brought up their previous failings when it came to detecting and tracking foreign invaders.

Development continued further with minimal issues, and the aircraft was greenlit for production, of which 210 have been ordered, and 87 of which are in full operational service as of the current year. Exports were blocked, firstly as a measure to prevent the capabilities of the aircraft from leaking as had happened with Mardel's F-20 export figher, and secondly as a petty retaliatory

gesture to the Aldelians, although later on the aircraft was evaluated by the Aldelians themselves. While they had no intention of purchasing, they were intrigued with what their allies had produced, and following the evaluation released a statement commending the effort by Mavic, claiming that "Our allies have produced a formidable fighter, and we look forward to working with them in future when producing future technologies."

The aircraft has seen limited combat, primarily intercepting strategic bombers fielded by Andalowë skirting their northeastern border, and military aircraft fielded by Redwood, who tend to fly near the western coast of the nation.

General Statistics

Crew: 1

Wingspan: 13.27 metres
Height: 2.94 metres
Empty Weight: 22,000kg

MTOW: 43,000kg

Performance

Engines: 2x United Turbine Corporation (UTC) ATF-310-25 Max Thrust: 29,000 lbf each dry, 38,000 lbf with afterburner

Maximum Speed: Mach 2.8 (regulated), Mach 2.95 (actual), Mach 1.4 (supercruise)

Service Ceiling: 12,500 metres

Armament

Gun: 1x 20mm GRU-2 Rotary Cannon, 410 rounds stored

Weapon Bays:

- · 6-cell Main Bay (between cockpit and engine)
- 2-cell Central Bay (between engines)
- · 2x Side Launchers

Air-to-Air Mission Loadout

- · 6x AMRAAM-4 (Forward Bay)
- · 2x AMRAAM-4 (Central Bay)
- · 2x SRAAM-6 (Side Launchers)

Air-to-Ground Loadout (Short Range)

- · 10x GO.250 Glide Bombs and 2x AMRAAM-4 (Forward Bay)
- · 2x AMRAAM-4 or 6x GO.250 Glide Bombs(Central Bay)
- · 2x SRAAM-6 (Side Launchers)

Air-to-Ground Loadout (Long Range)

- · 4x LRAGM-2 Cruise Missiles and 2x AMRAAM-4 (Forward Bay)
- · 2x AMRAAM-4 or 2x LRAGM-2 Cruise Missiles (Central Bay)
- 2x SRAAM-6 (Side Launchers)

Misc.

· Up to 4 external hardpoints can be attached to carry 4 external fuel pods.



Air Superiority Fighter

1_36E

Performance

Maximum speed: Mach 2 (2,135 km/h; 1,327 mph) at altitude Mach 1.3 (1,400 km/h; 870 mph) supercruise at altitude

Range: 3,500 km (2,200 mi, 1,900 nmi) subsonic, 4,500 km from 2 outboard fuel tanks

Supersonic range: 1,500 km (930 mi, 810 nmi)

Service ceiling: 20 000 m (66 000 ft)

g limits: +9.0

Wing loading: 371 kg/m2 (76 lb/sq ft) normal takeoff weight

Thrust/weight: 1.16 at normal takeoff weight (0.99 at loaded weight with full fuel)

Armament

Guns: 1 × 30 mm Gryazev-Shipunov GSh-30-1 autocannon

Hardpoints: 12 hardpoints (6 × internal, 6 × external)

Air-to-air missiles:

R-77M

R-74M2

R-37 (missile)

Air-to-surface missiles:

 $4 \times \text{Kh-38M}, \text{Kh-59MK2}[245]$

Anti-ship missiles:

2 × Kh-35U, Kh-31 etc.

Anti-radiation missiles:

4 × Kh-58UShK

KAB-250 guided bomb

KAB-500 guided bomb

Anti-tank "Drill" 500 kg cluster-bomb + active homing

Avionics

Sh-121 multifunctional integrated radio electronic system (MIRES)

Byelka radar (400 km, 60 tracks with 16 targeted)

N036-1-01: Frontal X-band active electronically scanned array (AESA) radar

N036B-1-01: Cheek X-band AESA radars for increased angular coverage

N036L-1-01: Slat L-band arrays for IFF

L402 Himalayas electronic countermeasure suite

101KS Atoll electro-optical targeting system

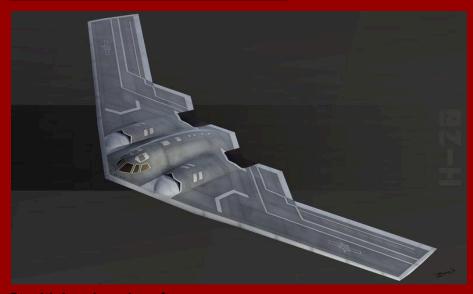
101KS-O: Laser Directional Infrared Counter Measures

101KS-V: Infrared search and track

101KS-U: Ultraviolet missile approach warning system

101KS-N: Targeting pod

101KS-P: thermal imager for low altitude flying and night landing.



Stealth bomber aircraft

PP-7

Crew: 1

Length: 65 ft 11 in (20.09 m) Wingspan: 43 ft 4 in (13.21 m) Height: 12 ft 5 in (3.78 m) Wing area: 780 sq ft (72 m2)

Airfoil: Lozenge section, 3 flats Upper, 2 flats Lower

Empty weight: 29,500 lb (13,381 kg)
Max takeoff weight: 52,500 lb (23,814 kg)

Powerplant: 2 × General Electric F404-F1D2 turbofan engines, 9,040 lbf (40.2 kN) thrust each

Performance

Maximum speed: 3,600 km/h

Range: 930 nmi (1,070 mi, 1,720 km) Service ceiling: 45,000 ft (14,000 m)

Wing loading: 67.3 lb/sq ft (329 kg/m2) calculated from

Thrust/weight: 0.40

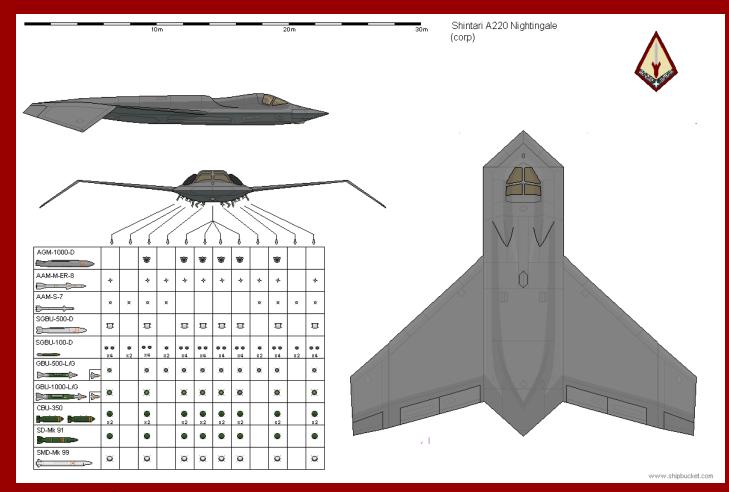
Armament

2 × internal weapons bays with one hardpoint each (total of two weapons) equipped to carry: Bombs:

GBU-10 Paveway II laser-guided bomb with 2,000 lb (910 kg) Mk84 blast/fragmentation or BLU-109 or BLU-116 Penetrator warhead

GBU-12 Paveway II laser-guided bomb with 500 lb (230 kg) Mk82 blast/fragmentation warhead GBU-27 Paveway III laser-guided bomb with 2,000 lb (910 kg) Mk84 blast-fragmentation or BLU-109 or BLU-116 Penetrator warhead

GBU-31 JDAM INS/GPS guided munition with 2,000 lb (910 kg)



Fighter Aircraft

The general concept is Su-34 meets Boeing Bird of Prey as a replacement for F-111. The aircraft design is one I've worked on and off since an ill-fated collab on NS a decade ago. It's one of those things where I essentially start from scratch each time and it has given me a nice glimpse of how my skills have developed over time. I've never been fully happy with any of the attempts (The Boeing Bird of Prey's shape is deceptively hard to draw with the way it's straight angles morph into gradual curves) 3rd image is quick sketch I threw together as a joke without intending to enter but since I've run low on time to draw alternate schemes and we're allowed 3 images I figured I may as well include it.

A220 Nightingale Stealth Fighter

Statblock:

Crew: 2, Pilot, WSOLength: 23 metersWingspan: 26 metersHeight: 2.89 meters

• Engine: 2 x Yoyodyne Propulsion low bypass non-afterburning turbofan KN of thrust each

• Top Speed: 3,800 km/h

Service Ceiling 12,000 metersCombat Radius: 6,000 km

• Ferry range: 14,000 km with supplemental tanks.

Empty Weight: 25,000 kgLoaded Weight: 40,000 kgMTOW Weight: 45,000 kg

Payload:

Maximum Weapons load of 8,500 kg

2 Side weapons bays each w/:

-3 x Hardpoints for up to 1100 kg Each

1 Center Weapons Bay w/:

- 1 x Rotary Rack for 4 Weapons up to 2000 kg each

- 2 x Hardpoints for for 200 kg each

Avionics

1 x 3 Panel Conformal AESA Multi-function Radar Set (2 nose and 1 tail arrays) (Optimized for Air to Ground functionality, Air-to-Air capability added w/ Block II Software)

1 x Electro Optical targeting system Misc RWR and other EW systems

The A220 Nightingale is an advanced 5th generation strike fighter. Due to its size, payload and range the Nightingale is often more described as bomber however, the official designation is the seemingly contradictory classification of Strategic Tactical Fighter". Despite the apparent naming mismatch, this classification is accurate and is reflective of the aircraft's two primary users, The Tactical Attack Command's (TAC) Heavy Fighter Wings, and the Strategic Attack Command's (SAC) Strategic Fighter Squadrons. The Heavy Fighter Wings uses the aircraft as a strike aircraft and missile fighter, while the Strategic Fighter Squadrons are equipped for long range nuclear strike missions. The fact that a single air frame was designed to equip both of these Commands is reflective of the aircraft they replaced, the Buzzard Tactical Fighter seeing use in both of these roles. The buzzard was roughly comparable to the American F-111 and was designed as missile fighter with secondary role of tactical strike. Like the F-111 the Buzzard eventually saw it self stretched to perform more strategic nuclear strike although unlike the F-111 and it's canceled B variant, The Buzzard never lost its place as a missile fighter, serving until the early 2000s in the interceptor role along the northern frontier. As a replacement for the Buzzard, it naturally followed that the A220 would be fulfilling both air to air and strike missions

Development for what became the A220 began under the TC-210 program. The TC-210 was a light stealth fighter developed in the Early 90s by multinational coalition to replace first generation stealth strike aircraft such as the F117 Nighthawk. Disagreements over program goals and conflicting requirements led to the Shintari Air Force eventually withdrawing and the

subsequent collapse of the project, however the basic technology developed under the program would live on

At the same time the TC-210 program collapsed, TAC's Buzzard was facing higher than expected wear due to the Southern Insurgency. While poaching low flight hour air frames from SAC's Special Fighter Squadrons was proposed, doing so without providing the command with replacement aircraft would have resulted in an unacceptable downsizing of the squadrons. In addition significant differences between the Tactical and Special Attack versions of the Buzzard would also have required costly refitting in order for Special Attack air frames to perform that the same missions as the Tactical Buzzards and the Tactical Buzzards lacked the PAL interlocks required for the Special Attack missions. An obvious, albeit expensive solution was a new aircraft and a call for proposals was put out.

Initial requirements were vague but included, reduced signature, twin engine, 10,000kg payload, minimum 10,000 Km range, crew of two. Supersonic speed was desired, but not required. (A saving grace for the subsonic A220). Initial interest leaned toward a restart of Buzzard production with minor modifications, however the survive-ability of the Buzzard in contested air space was a major concern and interest shifted towards a low observable design. With the lowest signature of any proposal the A220 design was selected despite the subsonic maximum speed and high projected costs. Development was eventually moved under the Next Generation Aircraft Production Program, with the goal of promoting commonality of systems between the Night Owl flying wing bomber and more conventional Night Eagle air superiority fighter.

While both the Nightingale and the TC-210 are derived the same basic shape (Derived from the Boeing Bird of Prey), the Nightingale program is significantly larger and more strike focused design that also ditches or reduces some of the TC-210s more ambitious features. Gone were such complications as the internal cannon and maneuverability and speed requirements. The strike capabilities however were greatly upgraded, compared to to it's predecessor. While still maintaining side bays of similar size to the TC-210, the A220 added a large center bay featuring a 4 weapon rotary rack along with 2 additional hardpoints. Overall the aircraft has 12 weapon stations although volume may restrict the use of some pylons. Due to weight over runs, the final production aircraft's payload fell short of the planned 10,000kg, at only 8,5000 kgs. In particular larger weapons in the side bays typically preclude the use of the side bays' center-line hardpoints and as a result they are rarely used. In addition, many configurations for the center-line bay may preclude use of the two hardpoints or more often limit the rotary rack from turning without opening the bay doors. Even with these restrictions however the payload is considerable: A typical loadout for an air to air mission is 10 AAAM-M-ER-8 BVR air-to-air missiles and two AAM-S-7 short range air-to-air missiles, for tactical strike up to 6 AGM-1000D, 8 SGBU-500D Glide bombs or 36 SGBU-100D small diameter glide bombs can carried. Other weapons that can be carried for the air to ground mission include most standard guided bombs and cluster munitions. For the special attack missions up 8 SD-Mk 91 or SMD-Mk 99 nuclear weapons can be carried. Unusual for stealth aircraft, the innermost side bay hard points are "wet" to allow for supplemental fuel tanks to be carried.

Due to the long range and extended mission times envisioned for the aircraft, a high emphasis was placed on crew comfort. The aircraft crew sits side by side in an all glass cockpit. A small rest area with food prep and chemical toliet are located aft. Crew access is from a hatch and ladder within the forward landing gear bay.

Propulsion is via two low-bypass non-afterburning turbofans. The engines are buried deep within the aft fuselage. To reduce thermal signature, the exhaust from the engine is routed over heat absorbing tiles and mixed with cold air prior to being leaving the low profile slit outlets. This engine placement, while beneficial for the aircraft's thermal signature is not without issues however as much of the rear of the aircraft needs to be disassembled for engine maintenance.

The A220's Avionics suite features a wide variety of sensors. The primary sensors include the Aircraft's sophisticated Electro-Optical Tracking System capable of tracking targets in both IR and Visual spectrum. A laser designation system allows the aircraft to self illuminate ground targets. A network of sensors around the aircraft provide for 360 degree IRST. The distinctive relatively flat wide shovel nose of the A220 led to one of the more notable advanced features of the A220 which is it's conformal AESA Radar system mounted within the nose and chines. A second aft facing radar is located between the engine exhausts.

The aft radar, due to being nestled between the twin slit exhausts were plauged by heat problems from the engines from the start. Other issues include being overweight with subsequent cuts to payload (Goal was 10k kg payload but final production was only 8000kg,). Initial Electronic warfare capability was reduced due to software issues. The rotary launcher had initial reliability issues(Later resolved). Another notable issue, less relevant to the mission but loathed by the crew was defective seals on the chemical toilet's tank are poor resulting in a foul smell if they were used during a mission.

The first image depicts a standard Nightingale in Measure S-2 "All Weather Grey" along with an assortment of common weapons indicating potential weapons loads. The second image depicts the aircraft landed while the third image depicts what is is likely the most notorious "variant" of the aircraft as originally displayed at the National Air Museum. In the early 2000s the Shintari Air Prototypes from the various programs were either considered too sensitive for public display or alternatively had no airframes to spare, with all prototypes in active use. Despite these obstacles, the Museum's Curators were insistent on exhibiting a stealth fighter. Any stealth fighter would do they said, it didn't matter the type. Each program office they contacted would politely decline before tossing them off to another program. Eventually they were passed to a currently unknown prankster at the A220 Program, known only by the name of Hugh Jass. The name alone should have been a warning sign but in their excitement this red flag was over looked. Mr Jass gave the curators the phone number of the A220 Project's highly secretive "Hyper Air Vehicle Experiment" (HAVE) Division. Allegedly a group responsible for testing advance variants of the aircraft.

After a lengthy confrere call with the group's manager, Benjamin Dover and the Chief Test Pilot Major Dick Long, the curators were at last promised a stealth fighter for display. The Hyper Air Vehicle Experiment 5-EX prototype, a previously classified variant of the A220 which was used to test advanced stealth technologies which hid the plane not only from radar but also hid it in the IR and visible spectrum.



Attack Helicopters

VF-8

Crew: 2 (pilot and weapon systems officer)

Length: 14.08 m (46 ft 2 in) fuselage

Height: 3.83 m (12 ft 7 in)

Airfoil: blade root: DFVLR DM-H3; blade tip:DFVLR DM-H4

Empty weight: 3,060 kg (6,746 lb)
Gross weight: 5,090 kg (11,222 lb)
Max takeoff weight: 6,000 kg (13,228 lb)
Fuel capacity: 1,080 kg (2,381 lb) internals

Powerplant: 2 × MTR MTR390 turboshaft engines, 972 kW (1,303 shp) each

Main rotor diameter: 13 m (42 ft 8 in)
Main rotor area: 132.75 m2 (1,428.9 sq ft)

Maximum speed: 290 km/h (180 mph, 160 kn) with rotor head mast

315 km/h (196 mph; 170 kn) without rotor head mast

Range: 800 km (500 mi, 430 nmi)

Ferry range: 1,300 km (810 mi, 700 nmi) with external tanks on the inboard hardpoints

Service ceiling: 4,000 m (13,000 ft)
Rate of climb: 10.7 m/s (2,110 ft/min)
Disk loading: 38.343 kg/m2 (7.853 lb/sq ft)
Power/mass: 0.38 kW/kg (0.23 hp/lb)

Guns:

1× 30 mm (1.18 in) GIAT 30 cannon in chin turret, with up to 450 rounds

On each of its two inner hardpoints and two outer hardpoints the Tiger can carry a combination of the following weapons:

Inner hardpoints:

1x 20 mm (0.787 in) autocannon pods, or

22x 68 mm (2.68 in) SNEB unguided rockets in a pod, or

19x 70 mm (2.75 in) Hydra 70 unguided rockets in a pod or

4x AGM-114 Hellfire missiles (Australia/France) or

4x Spike-ER missiles (Spain) or

4x PARS 3 LR missiles (Germany) or

4x HOT-3 missiles (Germany)

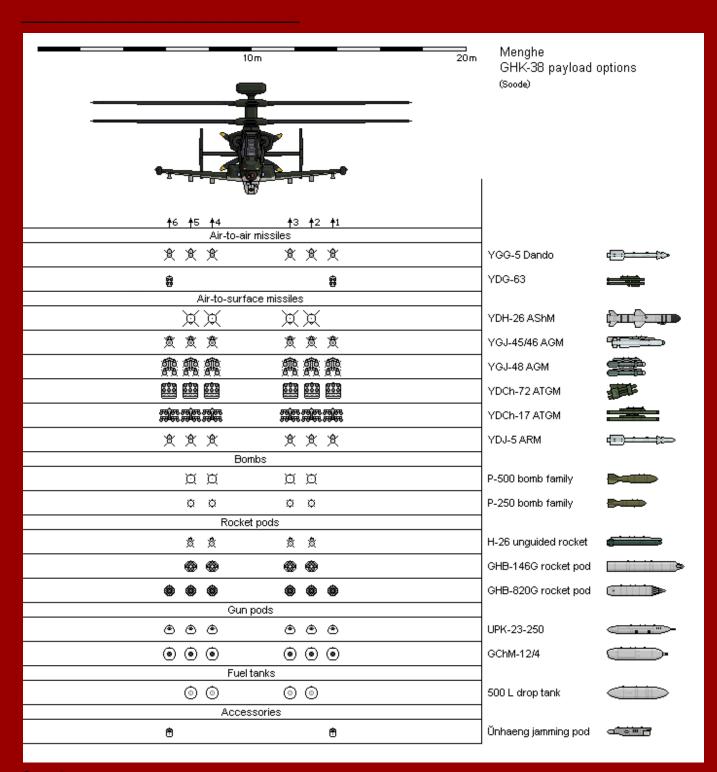
Outer hardpoints

2x Mistral air-to-air missiles, or

2x Air-to-Air Stinger (ATAS) air-to-air missiles (Germany), or

12x 68 mm (2.68 in) SNEB unguided rockets in a pod or

7x 70 mm (2.75 in) Hydra 70 unguided rockets in a pod



Overview

The GHK-38 uses a compound helicopter configuration, with a six-bladed pusher propeller in the rear to provide forward thrust. Its main rotor uses a coaxial configuration with four rigid blades per level. Both the coaxial lifting rotor and the pusher propeller are driven from the same

transmission by a pair of Taesan T508-1 turboshaft engines, each one generating 2,400 kW (3,200 hp) of power. There is also an auxiliary power unit forward of the transmission which provides power during the startup process and while grounded, though this is normally turned off during flight.

As on other attack helicopters, the crew consists of two personnel sitting in a tandem cockpit. The pilot sits in the rear, upper position, while the gunner and weapon systems operator sits in the forward, lower position. Both crew members have a full set of controls, meaning that the gunner can take over flying the helicopter if the pilot is incapacitated and the pilot can target weapon systems directly if necessary. Both crew members also have multi-function LCD screens, allowing them to receive input from different sensors and interface with different weapons.

In the rear fuselage, just behind the engines, there is an electronics access compartment with two rudimentary seats. Typically, this compartment would be used to rescue the pilot and copilot of another downed helicopter, a feature also retained on later models of the GH-26 Agŏ. In addition to electronics boxes, this rear compartment contains a basic first aid and survival kit and self-defense weapons for the downed aircrew. If no other helicopters are available, the GHK-38 can also rescue other ground personnel, including special forces and civilian VIPs, though the small size and limited amenities of the rear compartment make the GHK-38 inefficient as a transport helicopter. Outside of rescue missions, the crew can use the rear compartment to transport spare parts and personal effects when ferrying to a new base, or to deliver and recover high-value cargo. On most missions, however, the crew leave the rear compartment empty.

An unusual detail on the GHK-38 is the location of its exhaust. While most helicopters place the exhaust directly behind the turbines, the GHK-38 places it at the end of the tail boom, facing upward. Inside the fuselage, exhaust from the turbines combines with cool air drawn in through a set of vents on the roof, and the hot and cool air mix while proceeding through a pair of wide tubes in the tail, bringing the temperature of the exhaust closer to atmospheric temperature. The exhaust vent itself is beyond the main coaxial rotor, meaning that the rotor downwash does not blow the exhaust back onto the fuselage and heat up the helicopter's skin. While heavier and more complex than a conventional turbine exhaust, this system makes it harder for heat-seeking missiles to lock onto the helicopter, and also impairs detection and targeting by land-based infrared optics.

Sensors and Electronics

The GHK-38 will enter service with a new electronic combat system developed in Hallia. It will reportedly offer a higher degree of sensor fusion than previous Menghean and Hallian helicopters, providing the crew with good situational awareness, including alerting them to the presence of enemy anti-aircraft weapons detected by other platforms.

The pilot and gunner both use a version of the Keikō-II helmet-mounted display, which projects target markers, threat markers, and avionics information in front of the user's eyes and allows the user to "see" icons through the floor of the cockpit. This allows either crew member to look at a target and promptly redirect the autocannon and under-nose optical unit to face it. The Keikō-II HMD also provides both crew members with night vision, allowing all-day and all-weather operations.

On top of the rotor mast, there is a millimeter-wave radar antenna in a disc-shaped enclosure. This fixed array can scan a 120-degree arc in front of the helicopter, detecting land vehicles and passing their coordinates to the crew. When used in conjunction with a downward-facing radio altimeter, this system will reportedly give the helicopter terrain-following navigation capability, allowing low-level flights through uneven terrain in low-visibility conditions.

Armament

The Menghean model of the GHK-38 will carry a 30mm Shipunov 2A72 autocannon in an aerodynamically faired turret underneath the fuselage. This select-fire weapon has two ammunition feeds, one containing 700 rounds of high-explosive ammunition, and one containing 440 rounds of armor-piercing ammunition. APFSDS ammunition fired from the 2A72 can defeat 85mm of steel plate (line-of-sight thickness) at 1,000 meters, and 45mm of steel plate at 3,000 meters. Unlike the select-fire 2A42, the 2A72 only has a 300rpm setting.

The GHK-38 is fitted with six hardpoints, three under each wing. The two inboard pairs are rated for payloads of up to 700 kilograms, and the outboard pair, for payloads of up to 400 kilograms. Total payload capacity is reportedly 2,400 kilograms. All six hardpoints are wired to support rocket pods and guided missile modules, and the inner four are piped to support drop tanks. In addition to rocket pods and a wide variety of anti-tank missiles, the GHK-38 can also support a number of more unique payloads, such as the YGG-5 Dando air-to-air missile, the YDJ-5 anti-radiation missile, and 23mm and 12.7mm gunpods.

Author Message

Soode

Post subject: Re: Attack Helicopter Challenge Posted: February 20th, 2022, 12:54 am

Oπline Posts: 42

Joined: December 25th, 2020, 10:45 pm

Gyundoan-Han-Kansainyhteisön GHK-38 Wolverine

Limg

The Gyundoan-Han-Kansainyhteisön GHK-38 Wolverine is an advanced compound attack helicopter jointly developed by Hallia and Menghe. The Gyundoan-Han Helicopter Corporation contributed the powerplant and general layout, while Kansainyhteisön Ilmailu was responsible for the airframe materials and electronics. There are some minor differences between the

baseline variants developed in Hallia and Menghe, including the type of autocannon mounted under the hull and the spacing of the bomb suspension locks on the pylons, but most of these parts can be swapped out in production to streamline parts commonality.

As of 2022, the GHK-38 is in late-phase development, with the first deliveries tentatively scheduled for 2024.

Development:

Fast Attack Helicopter Program

In 2008, the Asalbanian Ministry of National Defense opened the Fast Attack Helicopter program. The goal of this program was to develop a new type of attack helicopter that would combine the speed and agility of the SS-32 Jamjari with the armor and payload of the GH-26 Agŏ. During the 2000s, the Asalbanian Army had used both of these helicopters in concert, with the SS-32 acting as a forward scout for the slower GH-26, but this division of labor had its drawbacks, including redundant sets of spare parts for two unrelated attack helicopter designs.

Menghe's two main design bureaus specializing in helicopters, Gyundoan-Han Helicopter Corporation and Saebyŏk Rotorcraft, both began work on competing prototypes. Gyundoan-Han, which had the most experience in original design work, was the initial favorite, but it struggled with many aspects of the design, particularly speed. By 2011, Gyundoan-Han had produced an independent design for a pushrotor-driven gunship with a coaxial rotor, but many of the components, including the engine, existed only on paper. No full-size prototypes of the Gyundoan-Han GH.347 design exist, but Gyundoan-Han did build a number of scale models for design expositions and wind tunnel testing; these show a stepped cockpit design and wider sponsons on either side of the cockpit.

Asalbania began with incremental improvements to its existing helicopter platform, the SS-32. A single SS-32 airframe was extensively modified during construction to feature a pusher propeller, a longer nose, and wider stub wings supporting three hardpoints each. This helicopter appeared at a Menghean military airshow in May 2014, and performed stunts for the audience while the announcer described it as a "new model of Army-Navy attack helicopter." Foreign press mistakenly assigned it the designation SS-36, and for a time the designation stuck, with the Menghean MoND issuing no corrections. In reality, Saebyŏk's SS.332 prototype was only meant as a testbed and concept demonstrator, and it never received a numeral designation from the MoND.

Joint Development:

Slow development continued until 2012, when representatives from Hallia expressed interest in merging the Fast Attack Helicopter program with their own plans for a new helicopter gunship. Under a division of labor negotiated the following year, Kansainyhteisön Ilmailu would contribute the airframe, electronics, and composite materials, while its Menghean partners would contribute the powerplant and general layout. Each country would then make their own modifications to the pylons and guidance systems to support locally made missiles.

GH 405

Asalbania produced a working prototype under the designation GH.405. It conducted its first flight on 25 June 2016 at Menghe's Hŭksan test site. The prototype reportedly satisfied or exceeded all performance-related expectations, and Gyundoan-Han and Kansainyhteisön Ilmailu proceeded with further design work.

The original GH.405 prototype carried a 23mm GSh-23L cannon in the centerline turret, derived from the turret on the SS-32. Hallia, however, proposed switching to a 20mm rotary cannon for ammunition commonality, and the Menghean MoND insisted on a 30mm autocannon in order to achieve greater range and armor penetration.

Design:

Overview

The GHK-38 uses a compound helicopter configuration, with a six-bladed pusher propeller in the rear to provide forward thrust. Its main rotor uses a coaxial configuration with four rigid blades per level. Both the coaxial lifting rotor and the pusher propeller are driven from the same transmission by a pair of Taesan T508-1 turboshaft engines, each one generating 2,400 kW (3,200 hp) of power. There is also an auxiliary power unit forward of the transmission which provides power during the startup process and while grounded, though this is normally turned off during flight.

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Protection and Countermeasures

The designers of the GHK-38 placed a heavy emphasis on survivability. A composite metal "bathtub" surrounds the cockpit, protecting the pilot and copilot against 23mm fire from the front and 14.5mm fire from the sides. The canopy is made of bulletproof armor glass, and is able to withstand 14.5mm ammunition. While still vulnerable to direct hits, these armor plates can also resist kinetic subminitions from airbursting 35mm and 40mm anti-aircraft rounds, as well as shrapnel from lightweight surface-to-air missiles. Gyundoan-Han claims that the rotor blades can "withstand" hits from 23mm autocannon projectiles, but it is unclear whether this refers to deflecting rounds outright or merely maintaining integrity after being penetrated.

In addition to its outside protection, the cockpit has a heavy metal armor plate behind the gunner's seat, with a heavy bulletproof glass plate above it. Both are purported to resist 14.5mm fire, though they may be able to stop 23mm projectiles slowed by the previous layer of armor. These plates help ensure that if one crew member is incapacitated, the other will still be able to fly the helicopter to safety.

As a final protective measure, the GHK-38 has a high level of crashworthiness. The crew seats are designed to sink into the cockpit floor on impact with the ground, and the armored cockpit bed itself can sink into the fuselage. In the event of engine failure, a backup tension system automatically deploys the forward landing gear to further cushion an impact with the ground; the pilot and copilot can also activate this system manually. The seats in the emergency rear compartment are simple cushioned panels bolted to the floor, and meet no crashworthiness requirements.

Gyundoan-Han chose a twin-engine layout in part because it offered greater redundancy than Saebyŏk's single-engine competitor. The two turboshaft engines are separated by metal plates and fireproofing equipment, and each one has a fire-suppression system that can be triggered automatically or activated manually from the cockpit. If either engine is damaged, especially by gunfire or proximity-fused missile warheads, the helicopter is able to fly at reduced speed on a single engine in order to return to a safe landing site.

The lack of a horizontal tail rotor somewhat improves survivability: unlike a conventional helicopter, the coaxial-rotor GHK-38 will not enter a tailspin if the tail rotor or its driveshaft are damaged, though it will have to transition to conventional helicopter flight. Even if the tail is completely lost, the Wolverine can still maintain a minimal degree of control through adjusting the main rotor blades, though this is only adequate for a controlled descent to the ground.

Fuel is divided between six tanks: two in the stub wings, two in the large wing roots, one forward of the gun ammunition magazine, and one aft of the rotor hub. All of these tanks are self-sealing and constructed with ballistic foam to reduce the risk of fire and leakage. An active two-way pump system transfers fuel between tanks to maintain stability around the center of gravity and recover fuel from leaking tanks.

All vital electronic systems and flight controls are duplicated, providing further resilience in the case of light damage to the fuselage.

Performance

Main power comes from two Taesan T508-2 turboshaft engines, each developing 2,400 kW (3,200 hp) of power. The T508-2 is derived from the T508-1 used on the Gyundoan-Han GH-36 Mulsuri, but differs in that the driveshaft protrudes from the nose of the turbine rather than its tail end. This allows the engines to be mounted behind the transmission, providing a small degree of protection against incoming fire.

Though less aerodynamically developed than some contemporary Hallian pusher-prop designs, the GHK-38 is still considerably faster than a conventional helicopter. During a test flight on 6 September 2019, the GH.405 prototype exceeded 425 km/h in level flight, comfortably surpassing its design goal. Heavy or complex payloads, however, are expected to reduce the helicopter's cruising speed.

Specifications (GHK-38G, Menghe):

General Characteristics

Crew: 2 (pilot and weapon systems operator)

Length: 17.15 m (56 ft 3 in) Rotor diameter: 15 m (48 ft) Height: 5.61 m (18 ft 5 in) Disc area: 353 m2 (3,619 ft2) Empty weight: 6,742 kg (14,864 lb)

Max. takeoff weight: 14,470 kg (31,900 lb)

Powerplant: 2 × 2× Taesan T08-2 turboshaft, 2,300 kW (3,600 hp) each

Performance

Cruise speed: 400 km/h (215 knots, 249 mph)

Combat radius: 815 km (440 nmi, 506 mi); with 2,000 kg (4,400 lb) payload Ferry range: 2,630 km (1,420 nmi, 1,634 mi) 4× 500 L tank, full internal fuel

Service ceiling: 6,100 m (20,000 ft) Rate of climb: 14.6 m/s (2,950 ft/min)

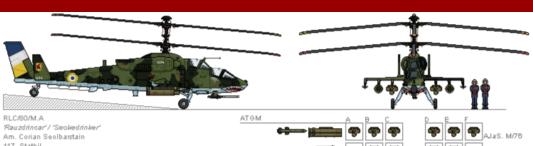
Armament

Guns: 1× chin-mounted 2A72 cannon with 1,140 rounds of 30×165mm ammunition (700× HE,

440× AP)

Hardpoints: Three pylons under each wing

Pylons 1,6: 400kg capacity Pylons 2,5: 600kg capacity Pylons 3,4: 600kg capacity



117. Stathil Miri. Meric South Kesh. 1989

Helicopter 1174 'Smokedrinker' was named for a turn of phrase in Meric literature referring to those who crave death or destruction for their own amusement or personal gain. This aircraft was crewed by pilot Corian Seolbarstain and gunner Diro Gote until 1989, when it disappeared during a regular patrol over the northern island of Suwamara in the Ramay archipelago. Efforts to find Smokedrinker and her crew were complicated by the arrival of Typhoon Anton in July of 1989. Seolbarstain and Gote were listed as missing in action. presumed dead, until 2017, when Smokedrinker's tail stathil insignia was identified in a Ramay military museum, leading to an investigation that confirmed the shootdown of helicopter 1174 by forces of the Republic of Ramay on June 19th, 1989.

ATGM		Α	В	C	D	E	F	
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Rocket =		•	•			٠	٠	AJaS. M/87 Gonganur
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A.A.		å	A	å	煮	å	Å	PGS. M/75
Gunpod		+					+	WJaS. M/79
		-		•	•			DB/135 M/8
		•			•			DB/220 M/8



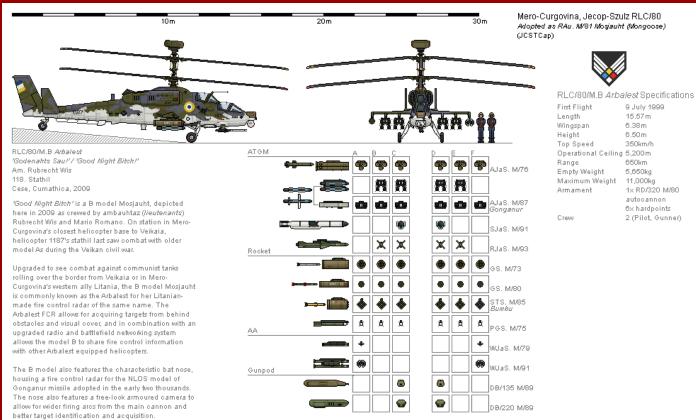
RLC/80/M.A Specifications

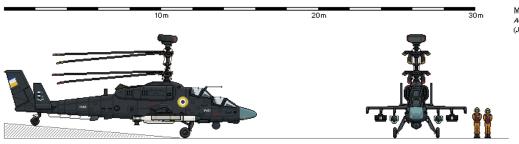
First Flight 1 August 1980 15.57 m Length Wingspan Height 6.38m 5.92m Top Speed 325km/h Operational Ceiling 5,000m Range 670km Empty Weight 5,500kg 10,500kg Maximum Weight

Armament 1x RD/320 M/80 autocannon 6x hardpoints

Стеии 2 (Pilot, Gunner)

www.shipbucket.com





RLC/99M 'ldris'

Am. Eregang Crabb Marin Stathil *Rynbu*

Aviation Cruiser Iwagt inte Rynbu, 2018

Stationed on the aviation cruiser Away in a Rainbow, helioopter 1421 'Wirs' is named for a Merand pre-Messian god associated with the sea. She is crewed by naval aviators Eregang Crabb and Rus Baltin. Although adopted for use as submarine and surface ship hunter-killers, the Cormorand sees more use as an anti-piracy vehicle with gunpods in the Sea of Ramay.

Initially intended to compliment the B model helicopters it was developed alongside, the Cormorand is not equipped with the same 20mm chaingun as other helicopters in the family. Instead it has been replaced with a powerful naval radar, which the helicopter uses alongside the Arbalest fire control radar to fire the potent M/91 anti-shipping missile. The platform also carries navalized Gonganur ATGMs for use against light craft in the Sea of Ramay and d the ever-present threat of Eurybian fast attack boats in a conventional war at home.

ATGM	Α	В	С	D	E	F	_
	de.	do.	de.	db)	de.	480	AJaS. M/76
		們	m	M	M		
							AJaS. M/87 Gonganur
] SJaS. M/91
Rocket		×	X	×	×] RJaS. M/93
	•	•	•	•	•	•] GS. M/73
No. of the last of	•	•	•	•	•		GS. M/80
	•	•	•	•	•	•	STS. M/85 Bumbu
AA	*	*	*	煮	Å	*	PGS. M/75
	+						WJaS. M/79
Gunpod	*					•	WJaS. M/91
			8	8			DB/135 M/89
			•				DB/220 M/89

Mero-Curgovina, JSz RLC/99M Adopted as MR M/2001 Commorand (JCSTCap)



RLC/99M Specifications

First Flight 13 August 1999
Length 16.02m
Wingspan 6.38m
Height 6.50m
Top Speed 350km/h

 Top Speed
 350km/h

 Operational Ceiling
 5,200m

 Range
 650km

 Empty Weight
 5,500kg

 Maximum Weight
 11,000kg

 Armament
 6x hardpoints

 Crew
 2 (Pilot, Gunner)

www.shipbucket.com

RLC-99

Hellas



Role: Attack helicopter National origin: Hellas Manufacturer: Icarus Aeroporía

First flight: April 1988 Introduction: 1990 Primary users: Hellas,Tarnovo

Produced: Since March 1989 in serial production

Number built: 150

Crew: 2, Pilot and Gunner

Length (overall): 14,5m Height: 5,02m Widght: 6,3m Weight: 3,6 t Max speed: 291 km/h Gun pods

ATGMs

ATGMS



The Koukouvagia is a fairely rather smaller attack helicopter compared to other Attack crafts, the reason is simple. The attack chopper was supposed to mainly fight against insurgents or generally in a low intensitity war.

Mainly doing hit and run attacks against infantry groups and fortifited sites.



Fliegkorps: 36 Luftwaffe: 120

Tragerreich Bodentruppen Fliegkorps KHuS 87 Drathaar B

Attack Helicopter Regiment 2 "Böser Mond"

OLt. Wolfgang Albarn OLt. Diezer Evans

Among the helicopter squadrons of the Bodentruppe, Attack Helicopter Regiment 2 sticks out like a sore thumb. Reason being, they were the first and only squadron to be fully equipped with 36 brand-new "Drathaar" Helicopters.

Unlike their Luftmacht counterparts, many squadron members were reluctant with their older "Mastiff" light attack helicopters being phased out, saying that the "Drathaar" were more expensive, needs heavy maintenance and less maneuverable.

First few sorties along the now relaxed Vimolan border proved to be a success as the pilots reported that unlike previous assumptions, the machine was relatively fast and easy to fly.

Soon the Drathaars was well loved by the squadron, with pilots eagerly stepping inside

the cockpit every time there was a sortie.

In 2000, two Helicopters; number 13 and number 17 were deployed to Buitenzorg to attend display flights for the 2000 Atreidan Defence Expo.

The displays were carried out perfectly by the experienced crew, as the attendees watched in awe. Unfortunately, the glory days of AHR 2 ends here.

Number 17 was heavily damaged during flight back home, it performed a belly landing and had to be repaired for several weeks.

Since the accident, members of the squadron, especially the pilots felt a "dreadful sensation" every time they approached the helicopters.

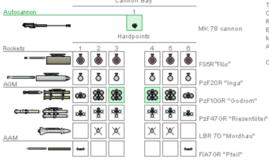
In particular, the crew of number 17 suffered extreme misfortune. The gunner had his legs amputated, and the pilot was discharged.
Apparently this did not affect new personnel.

KHuS 87 B Specifications

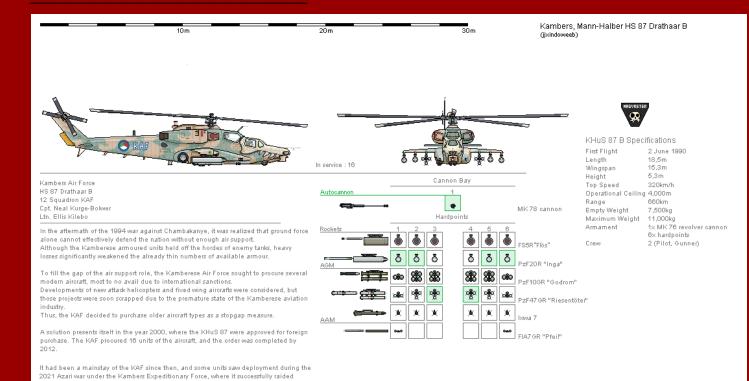
First Flight Length 2 June 1990 15,3m Wingspan Height Top Speed 5.3m 320km/h Operational Ceiling 4,000m Range Empty Weight 660km 7,500kg

Maximum Weight 11.000kg Armament

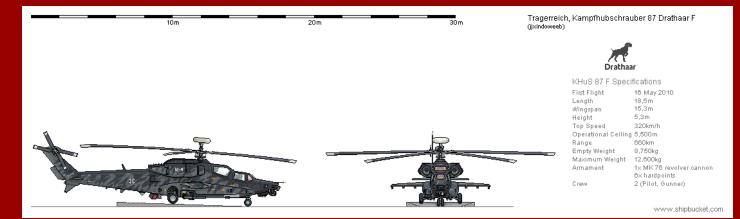
1x MK 76 revolver cannon 6x hardpoints Стем 2 (Pilot, Gunner)



KUSH-9



convoys and destroyed strategic sites with zero losses.



F-37



Light Cruiser

GG-5

Dimensions: The Ships measures 165 meters in length, with a beam of 16.5 meters and a draft of 6.5 meters. It has a full-load displacement of 12,000 tons, making it a formidable presence on the water.

Propulsion and Speed: The cruiser is powered by two gas turbine engines and two diesel engines, providing a combined output of 80,000 shaft horsepower. This allows the ship to reach a maximum speed of 32 knots and a cruising speed of 20 knots. The ship's range is approximately 8,000 nautical miles at cruising speed.

Armament: The primary armament of the Eagle's Talon consists of two 155mm Advanced Gur Systems, capable of firing Long Range Land Attack Projectiles at a rate of 10 rounds per minute. The ship also carries two 30mm Close-In Weapon Systems for defense against

incoming missiles and aircraft, and eight vertical launch systems capable of launching a variety of missiles, including anti-air, anti-ship, and land attack missiles.

Electronics and Sensors: The ship is equipped with a multifunction phased array radar system, capable of tracking multiple targets simultaneously. It also has a sonar system for anti-submarine warfare, and an electronic warfare suite for jamming enemy radar and communications



Heavy Cruiser

HC-66

Crew 364 men Sea endurance

Dimensions and displacement

Length 1/2.8 m

Draught 9.5 m
Displacement, standar

Displacement, full load 9 960 tons

Propulsion and speed

Speed 30 knots

Range

Propulsion 4 x General Electric LM2500 gas turbines delivering 80 000 shp to two shafts

Aircraft

Helicopters 2 x Sikorsky SH-60B Seahawk

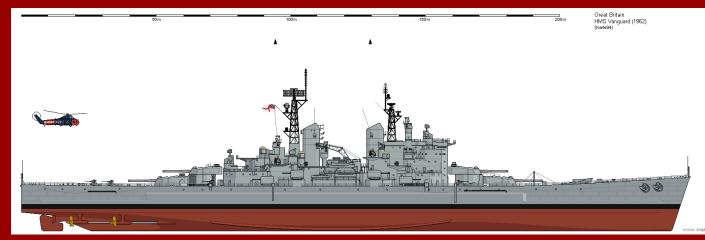
Armament

Artillery 2 x Mk.45 127 mm DP guns, 2 x Mk.15 20 mm Phalanx CIWS mountings

Missiles 2 x Mk.41 VLS system with Standard SM2-MR (68 missiles), Arosol and ASROC

(20 missiles), 2 x quad Harpoon anti-ship missile launchers

Torpedoes 2 x tripple 324 mm Mk.32 ASW torpedo tubes for Mk.46 torpedoes



Revenge-class **Guided Missile Battleship**

RVC

General Characteristics

Length - 245.4m (wl)

Beam - 32.9m

Draft - 11.5m/9.6m (dome/hull)

Displacement - 44,536t (standard), 52,214t (full)

Propulsion - 4 x screws, 4 x Republic Industries geared steam turbines, 8 x FDJ boilers,

193,500110

Speed - 32.5kt

Range - 8000nmi (18kt)

Armament

- Six 41cm /50 Type 39 guns (2xIII) mounted all forwards 110 rounds per gun
- Eight 13cm /54 Type 57 guns (4xII) mounted on the sides slightly aft of amidships 300 rounds per gun
- Two Type 67 short range SAM launchers mounted on the sides slightly forward of amidships-40 round magazine with Type 59 SAMs
- One Type 62 medium range SAM launcher mounted aft 75 round magazine with 55 Type 58 SAMs and 20 Type 60 Anti-Submarine Rocket
- Four Type 65 missile tubes mounted slightly forwards of amidships, two per side one Type 63 anti-ship cruise missile per launcher

- Two Type 60 torpedo tubes mounted aft, one per side Three 31cm Type 57 anti-submarine torpedoes, 12 reloads per launcher
- Up to 10 helicopters housed in a two level hangar

Sensors and Processing Equipment

- Type 61 3D air search radar
- Type 59 2D air search radar
- Type 64 heightfinding air search radar
- Type 66 air search rada
- Type 63 sonar
- Type 59 fire control radar
- Type 58 fire control radar

Armor

Belt - 31cm inclined outwards at 19 degress

Deck - 21cm total (2cm-3.8cm-15.2cm from top to bottom)

Conning Tower - 41cm

Primary turrets - 41cm face, 24cm sides, 31cm rear, 18cm top

Secondary turrets - 2.5cm all around

Missile magazines - 15.2cm armored box

Cruise missile box launchers - 7.6cm

sion with 2 diesel engines (6 000 shp each) and a gas turbine (25 700 shp)

Airwing

Helicopters 5 x NH 90

Armament

Artillery 10 x 76 mm gun

Missiles 32/64 x RIM-162 ESSM air defense missiles, 8 x NSM anti-ship/land attack

cruise missiles

Torpedoes 20 x 324 mm torpedo tubes for Sting Ray torpedoes



Type: guided missile Battleship

BSH-8

Displacement: 22,000 tons standard; 27,000 tons full load

Length: 231.50 meter (759 feet Beam: 29,56 meter (97 feet)

Draft: Hull: 8,83 meter (29 feet); Sonar: 14,02 meter (46 feet)

Propulsion: 2 X HC3N Reactors powering 2 propulsion turbines powering 2 electric motors and 2 small electric motors: 150,000 shp. and two bow mounted retractable emergency propulsion.

4 x Diesel generator mounted forward and aft, port and starboard. to increase the ships

electricity production but also function as backup.

Speed: Officially in excess of 31 knots

Range: Classified, Unlimited Expected reactor life: 40+ years

Complement: 750 after MLU and due to automation, reduced to 450 in peacetime, life raft for up

to 1500

Sensors and processing systems

Combat system:

- HALIAR 4 Combats system
- DELAR 2 Combat system (backup)

Radars:

- ACX2-A: Long range 3D radar (multi function, Search and target, illuminate)

- ACG1-F: Light Short range 3D radar (Multi function, navigation, Search, flight deck control)
- Type 327 Long range 2D radar.
- A2dF flight radar
- Cf11 long Range Navigation radar
- 3 x of the shelf standard navigation radar
- 5 illumination radars
- Several Communications systems

Sonars:

- Type-3402-D Havoc: Heavy sonar (active-passive) (extremely powerful, limited in operation during peace time, due to it's power)
- Type- 2811-Sonic: light sonar (active-passive) (The sonar that is always in use)
- Towed cable sonar (length: classified; detection method:classified)
- Towed active sonar

Electronic warfare and decoys

- Mark 3, decoy launcher: ASW/AAW
- Nulka derivative
- 2 quad, grenade depth charger launcher

Armament

Missiles:

- 3 x Mk 26 mod 2 GMLS (RUR-5, RIM-66 SM-1MR, RIM-66 SM-2 MR)
- 10 x Type-28 R-VLS twin Carousel (firing standard NATO-AAW missiles + Caledonia AAW missiles and ASuW missiles) (ASuW missiles from the inner carousel, since it's a full length)
- 5 x quad short quad revolver: ASuW nuclear tipped missile or non nuclear tipped missile
- up to 8 x short in defense missile launcher

Guns:

- 1 x twin 13" (Artillery) (Build by Havok industries, in a hidden turret!)
- 4 x 40/70 DP guns
- 2 x 30 mm gatling guns in 8 stations
- a number of stored HMG, mortar and rocket launcher

Torpedoes and others:

- 2 x twin light weight torpedo launcher (can fire electronic warfare torpedo) (later would receive anti torpedo, torpedoes)
- 2 x twin heavy weight torpedo launcher (can fire electronic warfare torpedo) (fire standard torpedo and ASW missile) (can fire nuclear warhead torpedo)

Armor: 70-80mm plating around reactor, with Kevlar over vital areas. Composite armor protection over vital area including reactor area. Splinter protection. (reactor compartment can have it walls filled up with water or other type of fluid)

Aircraft carried: Normal: 2 heavy; 3 medium Flight deck build to handle Chinook or similar.



Auxiliary Ship

NR-77

Displacement

20,240 t (19,920 long tons)

Length

173.7 m (569 ft 11 in)

Beam

24 m (78 ft 9 in)

Draught

7.4 m (24 ft 3 in)

Propulsion

2 × MAN Diesel 12V 32/40 diesel-engines, 10,555 kilowatts (14,154 bhp)

2 × reduction gears, 2 × controllable pitch five-bladed propellers

1 × bow thruster

4 × diesel generators

Speed

20 knots (37 km/h; 23 mph)

Endurance

45 days Armament 14 × MLG 27 r

14 × MLG 27 mm autocannons

Stinger surface-to-air missile (MANPADS)

Aircraft carried

10 × Sea King or NH90 helicopters

Aviation facilities

Hangar and flight deck



USV Ship Peshkaqeni

Speed

27 knots (50 km/h; 31 mph)

Range

10,000 nautical miles (12,000 mi; 19,000 km)

Endurance

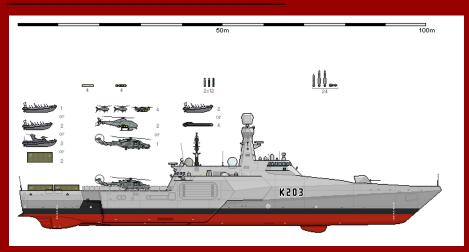
30-90 day without supply

Complement

None

Armament

None



Stealth Corvette

STCS

- > Dimensions:
- > 340ft 6in (oa)
- > 315ft 6in (wl)
- > Length; 85ft beam;
- > 15ft 6in draught (over sonar dome), 10ft (main hull).
- > Machinery: four MTU Type 20V 4000 M53B diesel generators driving four waterjets
- > Speed: 34kts (deep and clean)
- > Range: 7,000 nautical miles at 18kts > Displacement: 5,350 tons standard
- > Armament:
- > 1x 57mm BAE-Bofors Mk.3 gun mount, fire-control by 2x Sea Eagle FCEO Mk III
- > 2x1 40mm BAE-Bofors Mk.4 gun mounts, fire-control by 2x Sea Eagle FCEO Mk III
- > 2x1 12.7mm Leonardo Hitrole G CIWS
- > 24x CAMM VLS with ExLS compatibility for CAMM & CAMM-ER SAMs and/or Sea Spear-ER SSMs/land strike and/or Sea Spear 1 (Sea Brimstone) SSMs0
- > 2x2 12.75in lightweight A/S torpedo tubes for Stingray
- > Aircraft: 1x NHI NH-90 or 2x AH-1Z
- > Radars:
- > Thales NS-200 3-D search radar
- > 2x Type 1009 navigation radars
- > 4x Type 1010 phased-array surface search radars
- > 4x Gatekeeper EO/IR sensors
- > Thales Kingklip multi-function sonar
- > FW/Defences
- > Thales Agile-D ESM
- > 6x MAWS/DAS
- > 2x12 Centurion decoy launchers
- > 4x DLF(3) floating decoy launchers
- > Multirole Capability:
- > One stern multi-mission dock for up to 2x containers

- > Quarterdeck space for up to 2x containers
- > Multi-mission bay in outriggers for 2x RHIBs



Frigate Ship

SP-97

Crew 255 men

Sea endurance

Dimensions and displacement

Length 143 m

Beam 17.4 m

Draught 4.4 m

Displacement, standard

Displacement, full load 5 780 tons

Propulsion and speed

Speed 29 knots

Range 7 400 km at 18 knots

Propulsion CODAG arrangement with one gas turbine (35 514 shp) and two diesel engines (10 061 shp each), to two shafts

Airwing

Helicopters 2 x NFH 90 or Sea Lynx Mk.88A

Armament

Artillery 1 x 76 mm gun, 2 x 27 mm guns

Missiles 32-cell Mk.41 VLS with 24 x Standard SM-2 and 32 x ESSM missiles; 2 x RAM launchers with 42 RIM-116 surface-to-air missiles, 8 x RGM-84 Harpoon anti-ship missiles

Torpedoes 2 x tripple 324 mm launchers for MU90 lightweight torpedoes



Corvette Ship

KVS-5

Displacement

3,300 tonnes (3,200 long tons) full load[5]

Length

109 m (357 ft 7 in)[5]

Beam

13.7 m (44 ft 11 in)[5]

Installed power

20,384 hp (15,200 kW)

Propulsion

CODAD: 4 × Pielstick 12PA 6 STC6 Diesel engines[6]

Speed

25 knots (46 km/h; 29 mph)[6]

Range

3,450 nautical miles (6,390 km; 3,970 mi)[4]

Complement

123 (incl. 17 officers)[9]

Sensors and

processing systems

Revati Central Acquisition Radar

EL/M-2221 STGR fire-control radar

BEL Shikar

NPOL HUMSA (Hull Mounted Sonar Array)

Bomber Electronic warfare (EW) suites - BEL Ajanta

Electronic warfare

& decoys

Sanket electronic warfare system

Kavach decoy launcher

CMS-28 combat management system[6]

Armament

Anti-air weaponry:

1 × OTO Melara 76 mm Super Rapid Gun Mount (SRGM)-Manufactured by BHEL

2 x AK-630M CIWS

To be outfitted with 32 × VL-SRSAM (planned)

Anti-submarine warfare:

2 × RBU-6000 (IRL) anti-submarine rocket launcher

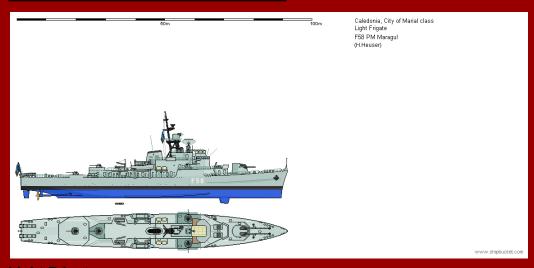
2 x quad 533 mm torpedo tubes (Varunastra)

Aircraft carried

1 × Ka-28PL or HAL Dhruv[

Aviation facilities

Rail-less helo traversing system and foldable hangar door



Light Frigate

F-58

Length: 100 meter+ Beam: 11.8 meter draft: 5.8 meter

weight: V1: 1.800 tons standard, 2400 tons fully loaded, V3: 2000 tons standard, 2700 tons fully

loaded

propulsion: triple steam boilers, two high pressure and one low pressure steam turbine, 40,000 .

hp

Speed: 35 knots, 39 knots sprint

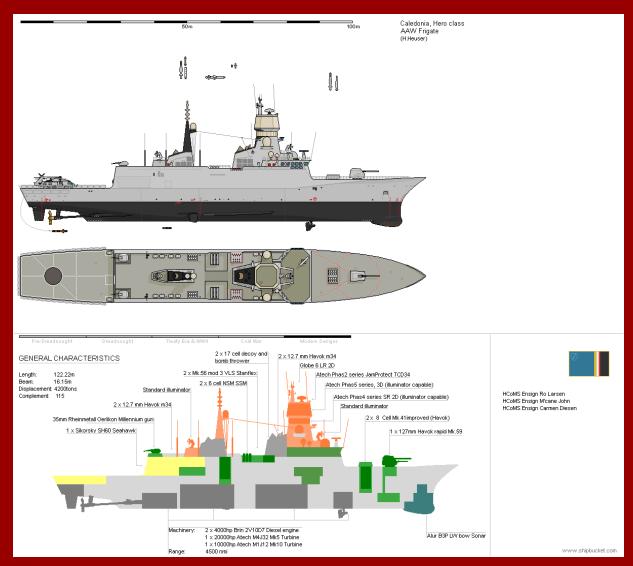
Sensor: 2D radar (later upgraded to 3D)

Hull mounted sonar (later, a towed sonar was equipped)

Upgraded and totally rebuild light-weight fire director from old Destroyers with added electronic/radar (later replaced with either 1 or 2 modern fire director, sometimes with an additional manual fire director)

MLU:

- 1 x 127 mm twin Befer Mk.34
- 3 x 40 mm twin Bofors and Befer
- 2 x 12,7 mm sinlge
- 1 X twin Shark Mk.6 Befer AAW missile
- 6 single Penguin launcher
- 2 x triple torpedo launcher
- depth charges of various type and equipment (aft station was replaced by towed sonar)

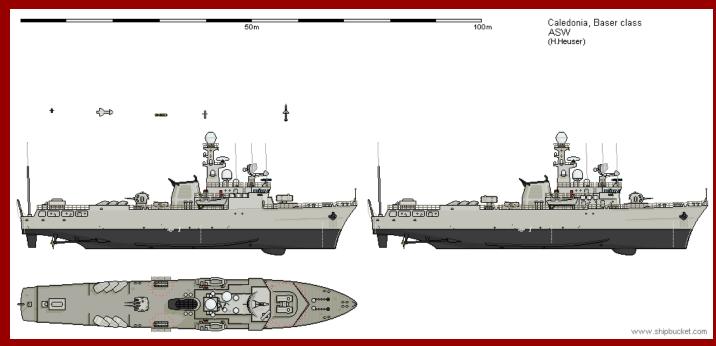


Frigate

AA-H

Update log:

- 76 mm replaced by a 127 mm
- compartment adjustment for the flex deck.
- Main radar adjusted a little
- more communication equipment added
- color adjustmer
- Change of helicopter
- ASW variant added



ASW-corvette

displacement: 1100 tons

Length: 73 meters

Beam: hull. 10,8 meters

draft: 4,36 meter (sonar: 5,63 meter)

speed: 26+ knots

crew: 30-50

Armament:

1 x twin 40 mm DP

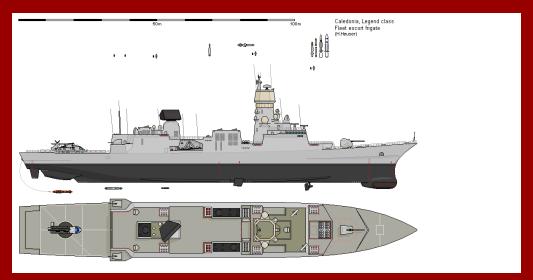
1 x quad Mk-29 ESSM AAW

6 x Penguin launcher ASuW

2 x triple Torpedo tubes

1 x 16 barreled, revolver ASW Shooter for small ASW depth chargers.

various of self defense armament



Frigate

FF-5F

Dimensions:

Lenght: 143,86 meter (471,98 feet)

Beam: hull: 19,96 meter (65,5 feet); max: 22,4 meter (73,5 feet)

Draft: sonar: 8,68 meter (28,5 feet)

Displacement

7,590 tons standard

Powerplant

2 x 30000 Atech M5J21 Mk2 Turbine

1 x 15000 Atech M2J08 Mk8 Turbine

4 x 4000 Brin 2V10D7 Diesel engine

6 x 1000 Brin GE2V8D2 Genset (backup engine)

Speed

32kts on 3 turbine and 3 diesels, 14kts on 4 diesels

Crew

from 150 to 280

Armarment

1 x 127mm Havok rapid Mk.59

2 x 40mm Havok Multi rapid Mk.45

1 x Mk.41 32 cell VLS (Havok license, improved version)

2 x Mk.56 mod 3 VLS stanflex (Havok license)

6 x 17 cell Havok decoy and bomb thrower

2 x 6 cell NSM SSM

2 x twin small ASW torpedo launcher

2 x single large ASW torpedo (Atech Mk.19 High speed ASW torpedo)

Radars & Sonars

Atech Phas5 series, MR 3D (illumination capable) radar Atech Phas4'2 Series, SR 2D and JamProtect radar Globe 2 Avento, SR 3D radar, low energy (backup)

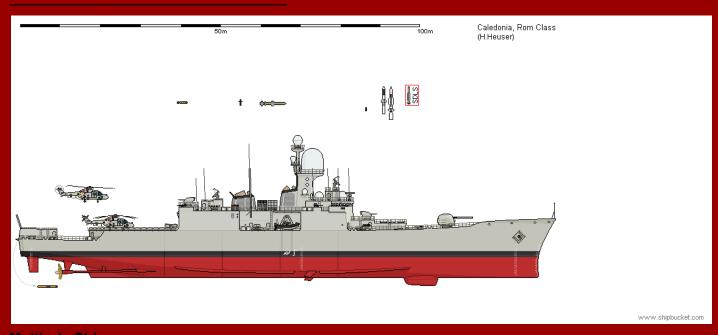
Globe LR1000, E-LR 2D

Alur B8P1 Bow sonar (active/passive)

Alur Al7d4B towed autonom sonar (active/passive)

Aviation:

2 x Sikorsky SH60 Seahawk (license produced)



Multirole Ship

MUL-5

Length: 134.4 meter Beam: 15.2 meter depth: 8.2 meter

Displacement: 6000 tons

power: 1 large gas turbine; 1 medium turbine; 4 diesel generators total 80000 hp

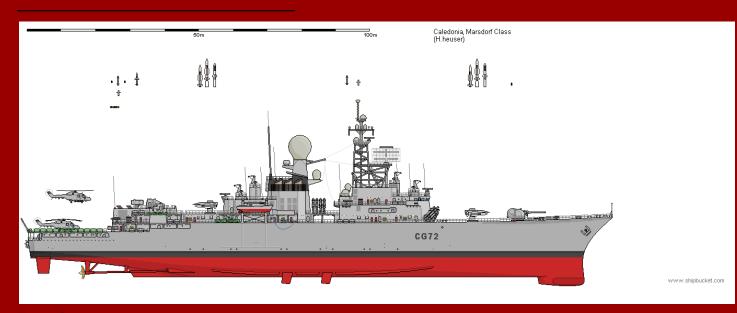
speed: 28+- knots

crew: 175

Armament:

- 1 x 5" gun
- 2 x 30mm gun
- 1 x Mk29 AAW
- 2 x triple ASuW launcher
- 1 x Mk41 32 cell VLS
- 2 x Mk41 8 cell SDLS
- 2 x triple torpedo launcher

Variuse small and light weapon system



Type: Corvette

H.H

Displacment: Approx: 10,000 tons full load

Length: 170.7 meters (560 feet) Beam: 19.2 meters (63 feet)

Draft: 9.9 meters (32.5 feet) with sonar

Propulsion

6 x Atech M5J21 Mk1 Turbine (27,000bhp, tot: 162,000bhp

4 x Befer M45D2V16 Diesel auxiliary engines (tot. 15000 bhp)

2 × controllable-reversible pitch propellers

2 × rudders

Speed:

Max: 36 knots (33 knots standard Max)

Range:

6000+ nmi at 20 knots; 3000+ nmi at 30 knots

Complement: 50 officers and 300+ enlisted

Sensors and processing systems:

- 1 x Havok ind. 6D3 Type 6 Long range radar
- 1 x Havok ind. 6GD2 Type 12 Medium range radar
- 1 x Havok ind. 56C Medium Indicator
- 1 x Havok ind. 58C Large Indicator
- 1 x Havok ind. F3 Gun fire control radar
- 4 x Havok ind. Licensed AN/SPG-62 fire control radar
- 8 x Comunication dishes
- 16 x short to medium range radio coms.
- 2 x Long range ultra long range radio coms.
- 4 x Havok ind. B6 Navigation radars
- 1 x Atech 67B/D Passiv/active hull mounted sonar
- 1 X Atech modified licensed 45/C towed active sonar

Electronic warfare & decoys:

Atech Mark 28 SRBOC

Atech Narwhale launcher SLQ Mk 8

Armament CG 72-78

- 1 x Havok ind. Mod 505 Mk 43, 140 MM (AAW, ASuW, ASW-limited)
- 2 x Havok ind. Mod 108 Mk 23 single, 40mm (AAW, ASuW)
- 2 x Licensed MK 26 GMLS mod 2 (RIM-66, RIM-156, RUR-5)
- 1 x Licensed Mk 29 GMLS (RIM-7)
- 4 x Simbad launcher for AAW rocket
- 4 x quad pack launcher for Mk-12 Eagle (ASuW)
- 2-4 x 12.7 mm machine guns
- 2 x 324 mm triple torpedo launcher for Stingray or equivalent

Armament CG 79-90

- 1 x Havok ind. Mod 505 Mk 44, 140 MM (AAW, ASuW, ASW)
- 2 x Havok ind. CIWS, 30mm Gatling (AAW, ASuW)

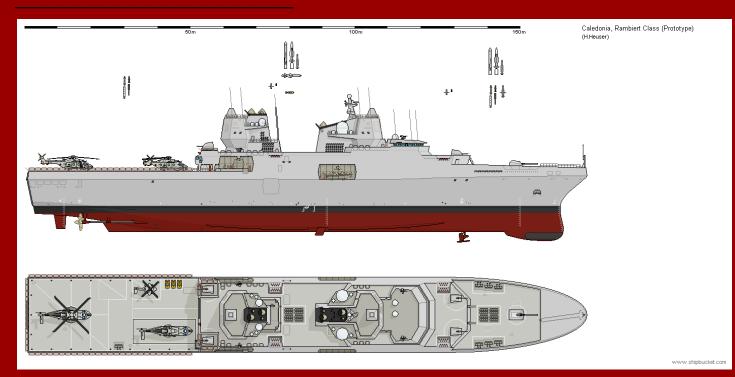
Licensed MK 41 VLS (160 cell's) (RIM-156, RIM-161, RUR-5, NLOS, RIM-162)

- 1 x 64 cell
- 1 x 80 cell
- 2 x 8 cell SDLS basic
- 4 x Simbad launcher for AAW rocket
- 4 x guad pack launcher for Mk-12 Eagle (ASuW)
- 2-4 x 12.7 mm machine guns

2 x 324 mm triple torpedo launcher for Stingray or equivalent

Helicopter Hangar with fully equipped repair facility:

2 x lynx helicopters. later on due to layout improvement/change there was place for 3 x lynx or 2 large helicopters



Type: Guided missile Amphibious Cruiser

KN-K8

Displacement: Standard 13.200 tons, dead weight at 17.600 tons

Length: 169,8 meters (557 ft) Beam: 23,0 meters (75,45 ft)

Draft: sonar: 10,21 meters (33,49 ft)

Propulsion:

- 4 Beffer M5000S: 27.000 SHP; tot.: 108.000 SHP (main propulsion)

- 4 Beffer G200ST: 4.000 SHP; tot.: 16.000 SHP (Combined "hotel and propulsion")
- 4 Havok DE-47JB6: 1500 SHP; tot.: 6000 SHP (Main Hotel, backup propulsion
- Small experimental fuel cell (battery charging + hotel)
- Batteries
- coupled to two shafts, through a advance gear that can either be powered by electric motors or directly from turbines (at a reduced efficiency), each driving a five-bladed reversible controllable-pitch
- propeller

Speed: in excess of 26 knots (officially), 8 knots on batteries

Range: 6500 nmi at 20 knots; 8700 nmi at 17 knots, 1500 nmi on batteries

Boats & landing craft carried:

- 2 x RHIB

- (flex deck can carry up to: max 3 medium personal hovercraft or 2 medium ferry hovercraft; Alternatively 8-10 Amphibious vehicle)

Complement: 180, Berthing for 350

Sensors and processing systems

- Ab-tech ASP6-ttf main Long range 3D radar (Arial/Surface search, targeting, tracking, fire control)
- AB-tech AP5-ttf secondary medium range 3D radar (Arial search, targeting, tracking, fire control)
- AB-tech EWP phase 2 (Electronic warfare package)
- AB-tech CN3 (Communication and network)
- AB-tech Nav.4 Long range (Navigation)
- AB-tech FPAS10 (fire control, short range Arial/Surface 3D radar)
- AB-tech Type3000 Active Passive sonar
- cameras (infrared, optical, etc.)

Armament

- 2 x 32 cell Licensed and redesigned Mk41-VLS tot.: 64 cell

BGM-109 Tomahawk Land Attack Missile

RIM-66M Standard medium

RIM-162 ESSM (4 per cell)

(RUM-139 Vertical Launch ASROC)

- 7 x 3 cell Havok Mk12-lightweight VLS tot.: 21 cell

NLOS-LS

RIM-166 RAM Block 2

A184 Scramjet (supersonic AAW (hypersonic capable at short range))

- 2 x quad NSM launcher with build in reload system
- 4 x 18 cell Beffer Mk14-protector (all in one launcher) (torpedo Countermeasures, Decoy Launching System, CHAFF Buoys)
- 4 x 55 mm Beffer Type 15DP
- 2 x twin 324 mm Torpedo launcher
- 1 x 127 mm Beffer Type 29 LDP (fire support)

Aircraft carried

- 3 x NH90
- 3 x UAV

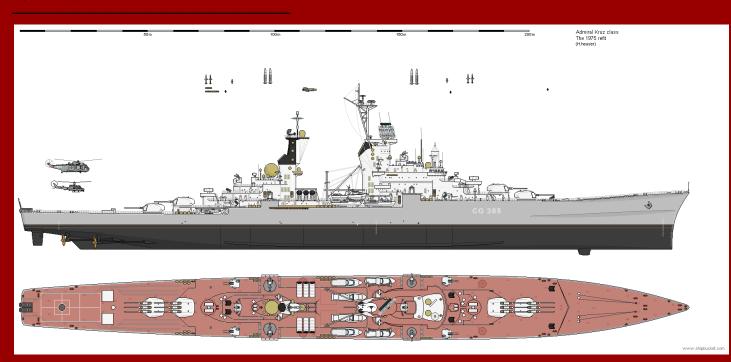
- 4 x Large drone

Aviation facilities

- UAV Hangar: space for 5 UAV + service facility. space for drones.
- Flex deck Hangar: space for 5 NH90 + 2 NH90 being serviced

Flex deck modules:

- 2-5-8-10-15-20 man Berthing module
- Medical module
- Hospital module
- Generator module
- service/workshop module
- Command module
- towed sonar module
- mine warfare modules
- 608 mm torpedo tube launcher module
- Water distillery module
- (variuse) store module



Heavy Cruiser

HV₅

Length: 262.28 meters (860 feet) Beam: 25.45 meters (83 feet) Draft: Hull: 9.2 meters (30 feet) Displacement: 32.300 tons standard; 36.000 tons fully loaded

Propulsion: 4 large and 6 small oil-fired boilers, powering 4 large and 4 small turbines; 170.000

shp

Speed: limited to 33 knots, test speed 38 knots

Range: 15.000 Nm at 16 knots. Complement: 800-1200 men

Radars and sensor systems:

- Globe 2-DIGR-3D (VLR 3D radar that can operate as a LR 2D radar at low power settings, Equipped with High finder and simple targeting system) (after 1975 refit; equipped with dedicated LR 2D radar, that beam on top of the radar)
- License SPS-12 (@ 1982 refit replaced by SPS-49) (note sister ship had it equipped already in 1975)
- Globe 2-series 2D radar LR (limited field of view due to placement, dome aft of aft funnel)
- 5 different type of Navigation radar (C-band and X-band)
- 4 x License build SPG-51
- 2 x License build Mk-95
- 2 x Mk-124B Main gun range finder (with limited missile guidance capability)
- Variuse SatCom, VHF and UHF
- Variuse detection systems
- Several Mk-1 eyeball position

Armament:

As build:

- 4 x triple 155 mm Mk8-G (Semi Automatic DP main guns) (1972 refit; adding of additional armor to the turret for protection against blast-damage and shrapnel that could occur in special situations)
- 12 x single 56 mm Mk-12 LW (AAW/DP)
- 25 x 20 mm (AAW)
- 10 x 12.5 mm (AAW)
- 2 x triple torpedo launcher (ASuW later also for ASW)
- 2 x depth charge thrower at stern
- up to 600 mines in various ready state

1975 refit MLU

- 4 x triple 155 mm Mk8-G (Semi Automatic DP main guns, 1975 refit could fire experimental rocket assisted shells)
- 4 x twin 56 mm Mk-18-C (AAW/DP) (replaced the Mk-12 at the 1972 refit, since Mk-12 could hold up with modern era technology and systems)
- 4 x 20 mm machine guns (stored onboard)
- 6 x 12.5 mm machine guns (stored onboard)
- 2 x triple torpedo launcher (ASW, with standard NATO torpedo and Caledonia Long range ASW torpedo)

- 2 x Mk-13 GMLS Rim 24 Tartar and Rim-66 Standard 1MR (later on with RIM-66 Standard 2MR)
- 2 x Mk-22 GMLS Rim 24 Tartar and Rim-66 Standard 1MR (later on with RIM-66 Standard 2MR)
- 2 x Mk-29 Rim-7E/H Sea Sparrow
- 6 x single ASMC E2 (LR ASuW missile)
- 4 x twin quad rocket launcher, mounted on 56 mm Mk18-C guns
- 6 x rocket assisted ASW weapon
- up to 600 mines in various ready state

Aviation:

Helicopter deck for Heavy helicopter



Destroyer Ship

DS-4

Dimensions:

- Length: 155 meters - Beam: 20 meters - Draft: 6.5 meters

- Displacement: 9,000 tons

Propulsion

- 2 x Gas Turbines, producing 50,000 horsepower each

- 2 x Diesel Engines, producing 20,000 horsepower each
- Maximum Speed: 35 knots
- Range: 6,500 nautical miles at 20 knots

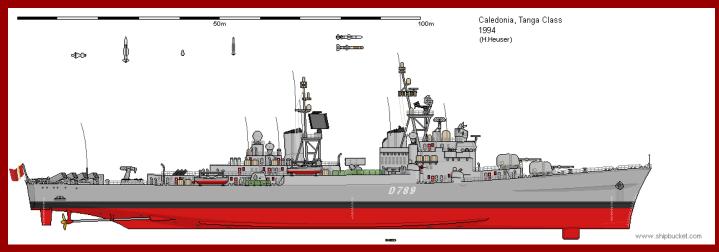
Armament¹

- 3 x 130mm Main Gun
- 2 x 30mm Close-In Weapon Systems
- 8 x Anti-Ship Missile Launchers
- 32 x Vertical Launch System Cells for Surface-to-Air Missiles
- 4 x Triple Torpedo Tubes

Flectronics

Advanced Radar and Sonar Systems Electronic Warfare Suite Integrated Combat Management System

Aircraft: 1 x Helicopter Landing Pad.



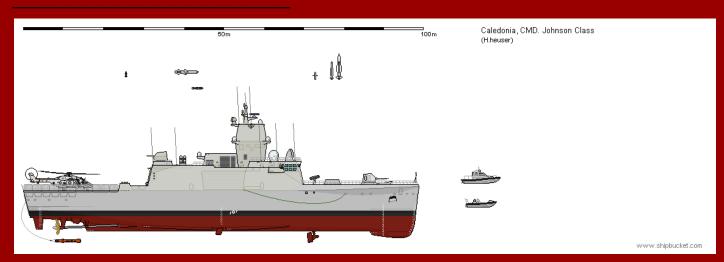
Destroyer

H.HL

Armament:

- 1 x twin 138mm DP gun Befer Mk-70 water cooled with improved rate of fire
- 2 x twin 57mm AA/DP gun Befer Mk-20 (license-build)
- 4 x single 40m AA gun Befer Mk-70/B with it's own radar (license-build)
- 2 x single 12.7mm machine guns
- 2 x Mk29 Sea Sparrow launcher, with reload build in to superstructure
- 3 x twin Mk-48 Mod 0 Sea sparrow launcher
- 2 x Mk-13 GMLS (upgraded by ElbTech Heavy industries)
- 8 x single Ronin Mk-15 ASuW missiles

- 1 x Mk 112 "Matchbox" with ASROCK and harpoon
- 1 x twin triple barreled ASW Mortar 14" Type 2/D upgraded with individually working barrel and extended range and improved accuracy.
- 2 x depth chargers



Stealth Destroyer

CMD-B

Material: a combination of steel hull and composite superstructure.

Length: 98,7 meters Beam: 15 meters

Displacement: 3500 tons

powerplant: Turbine and Diesel 30.000+ hp

Speed: official 25 knots crew: Standard: 48; max: 88 Hangar for medium helicopte

1 x 56 mm AA/DP gun

1 x 35 mm AA/DP gun

2 x 8 cell Mk. 41 VLS (ESSM and Standard)

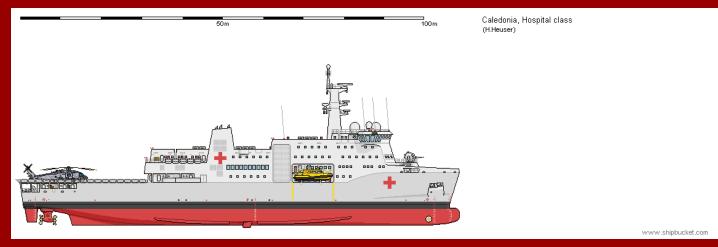
2 x 6 cell Mk. 19 RAM-VLS 2 x quad NSM launcher

2 x twin torpedo launcher

1 x cheap guided rocket launcher for AAW

depth charges

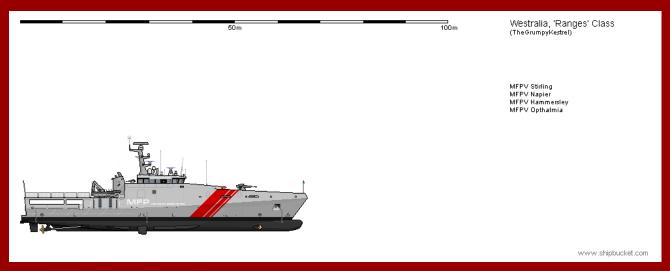
The Radar is and standard 3D Phased rotating radar build in to the radar tower, additional there are other radar's and sensors in that superstructure as well, but that is an secret.



Hospital Ship

Characteristics

- Medium hospital and hotel ship
- length: 109,11 meter
- 8 ship class
- Electric propulsion, powerplant: diesel/gas generators and batteries and shore power, for smooth power.
- 2 ships in the class is equipped with a larger powerplant for local electricity
- Hanger and helicopter deck, with some aviation fuel available and some limited repair capability (have some helicopter parts in storage)
- Helicopter deck capable to land large helicopter.
- Fully equipped hospital
- Ship build to be able to work in "dangerous" environment
- Can for periode of time work in radioactive areas, and have equipment to deal with contamination
- ship crew of 26. + Aviation crew and hospital/hotel crew.
- Limited cargo capacity



'Ranges' class <u>Patrol Vessel</u>

Displacement: 900 tons

Beam: 10.8m Draught: 3.3m Speed: 24kts

Range: 4000nm at 12kts

Crew: 22

Primary Sensors: TERMA Scanter 6002, Kelvin Hughes Sharpeye (X- and S- Band), Chess Sea

Eagle, SAFRAN Vampir NG IRST

Armament: Zuytdorp ZM35N 35mm, Zuytdorp ZM5N .50 RWS, Small Arms

Aviation: Landing deck area suitable for operation of light helicopter, capable of operating VTOL

or catabult-launched light UAS

Boats: Up to three RHIBs, with one permanently embarked via stern ramp



Patrol Vessel

KP-60

Technical Stats:

Length: 58,7 mBeam: 9 mDrought: 2,9 m

• Displacement: about 380 t

• speed: 25 kt

complement: standard: 15, up to 25
Boats: 1 x 7,5 m RHIB, 1 x 4,5 m RHIB

Armament

• optional: 1 x 30 mm Autocannon MK30 M10

• optional: 1 x double anti air missile launcher for BLR-85R

• 2 x .50 machine gun

Sensors

- 1 x navigation radar
- 1 x combined ground an air search radar
- 1 x ground search and fire directing radar
- 1 x SAT-com and communication equipment



Patrol Vessel

PLO-5

General Characteristics

Three hundred metric tons, displacement.

Nine metre beam.

Fifty-seven metres in length.

Complement of twenty-eight, with additional capacity for troops and/or detainees

Up to twenty-two knots of speed, provided by two MTU Diesel engines and two Kamewa waterjets.

Weapons Suite

1x1 CRN-91 30 millimeter automatic cannon.

1x6 Zhenhai 70 millimeter multiple rocket launcher.

1x1 high-pressure water cannon.

1x1 12.7 millimetre machine gun.

Assorted small arms, incl. DP-64 grenade launchers, SG 550 rifles, and one handheld C-UAS system.

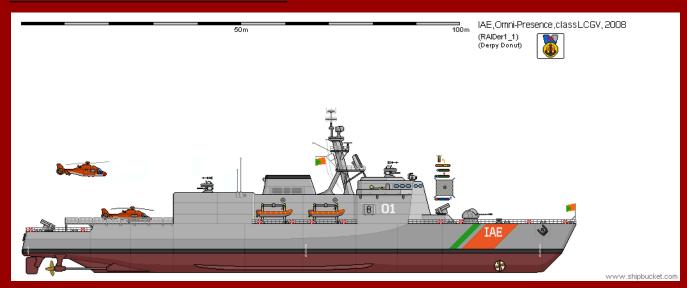
Sensor Suite

NS50 multipurpose surveillance radar.

Anapa-ME anti-saboteur sonar.

Sea Eagle navigation radar.

Furuno navigation radar.



Patrol Vessel

HE-44

Displacement- 4,900 t Length- 415 feet (126.4 m) Draft- 19 feet (5.5 m)

Installed power- 3 x Caterham 3512B diesel generators

Propulsion- Combined diesel and gas

- 2 × 7,400 kW (9,900 hp) MMT 21V 163 diesels
- 1 × 22 MW (30,000 hp) LMV250 gas turbine engine

Speed- Over 28 knots (52 km/h; 32 mph)

Range- 12,000 nautical miles (22,000 km; 14,000 mi)

Endurance- 60-90 day cycles

Complement124 (14 officers + 110 enlisted) and can carry up to 140 depending on mission

Sensors and processing systems-

- EAS 3D TRS-16 AN/SPS-75 Air Search Radar
- SQ-9B Fire Control Radar
- ASPS-9 Surface Search Radar
- ASLQ-3B(V)2

- AUPX-29A IFF
- AURN-25 TACAN
- MK 46 Mod 1 Optical Sighting System (WMSL 75 79)
- MK 20 Mod 0 Electro-Optical Sighting System (WMSL 74 70)
- Furuno X and S-band radars
- Link-18 tactical data links

Electronic warfare-

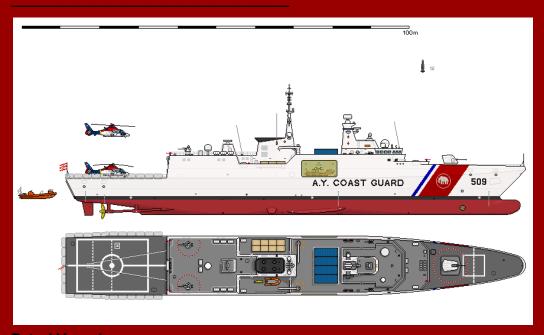
• ASLQ-3B(V)2 Electronic Warfare System

Armament-

- 1 × Ak726 twin 57mm autocannon with optical guidance systems
- 2x Kashtan twin 30mm CIWS with Sam missles
- 2 × crew-served .50 caliber (12.7 mm) Browning M2 machine guns
- 2 × crew-served M240B 7.62 mm machine guns
- 2x MP-ML (multipurpose-munition lunchers)

Armor- Ballistic protection for main gun

Aircraft- carried 2 × FaRH-18NH



Patrol Vessel

PA-5

General characteristics

Displacement: 3.640 tonnes

Length: 118.54 m Beam: 15.34 m Draught: 4.68 m Propulsion: 4xdiesel SEMT Pielstick 12PA6V280 STC2, 21,000 hp (16,000 kW)

Speed: 25 kn

Range: 4,300 nmi at 15 kn, 9,000 nmi at 12 kn

Endurance: 50 days of fooding

Complement: 84 (12 officers, 72 petty officers)

Boats & landing craft carried

2xMagnum 850 MKI Fast Rescue Boat, capacity for up to 17 persons (9.2 m) 2xMagnum-750 MKII Fast Rescue Boat, capacity for up to 15 persons (7.7 m)

Sensors and processing systems

1xAYU21 Baseline 1 Combat Management System
1xEADS TRS-3D/ 16ES PESA radar
3xFuruno X-band and S-band navigation radars
1xRheinmetall TMEO Mk2 electro-optical tracking system
1xElbit D CoMPASS electro-optics surveillance system

Electronic warfare & decoys:

1xITT Excelis ES-3601 ESM 2xMark 36 SRBOC chaff and decoy launching systems

Armament

1× Bofors 57 mm Mk3 gun (with 3P ammunition)
2xMk 38 Mod 2 25mm Machine Gun Systems
2x12.7mm Machine Guns
12×VL MICA surface-to-air missiles (peacetime 4xVL MICA)
3xHigh-pressure water cannons
2x1000RX Long Range Acoustic Devices (Portable)

Capacity

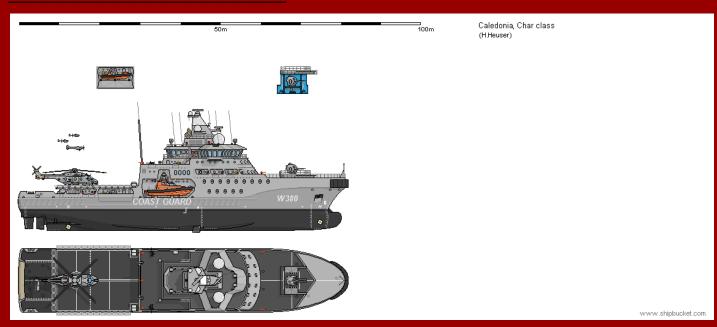
6x20ft Containers
2xTelescopic 2-ton Boom Cranes

Option:

2x20ft Combatant containers for 8xNSM surface-to-surface missiles

Aircraft carried

2x AS565 Panther helicopters (2xHangars) or 1x AS565 Panther helicopter + 2xCamcopter S-100 UAVs



Type: Coast Guard vessel, environment, fishery patrol and standby offshore tug

PPP-6

Displacement: 2900-3100 tons

Length: 82,45 meter Beam: 16 meters Draught: 5,18 meters

Powerplant

Propulsion by "Stadt lean propulsion"

16.000 hp, by 3 large and 2 small Diesel generator, powering 4 large electric engines @ 12.000

(rest is hotel power, ability to act as local powerplant in emergency)

Speed 23 knots; can for short period of time, sprint at 27 knots! when running on both electric and diesel engine, time limited by the gearbox (due to temperatur. Would later in the carrier receive a new type of gearbox that would solved the problem)

Crew: 8 officers and 8 conscripts. Designed for a crew of 40. Life raft capacity for minimum: 350+

Sensors:

- Long range navigation rada
- Medium range navigation radar

- Medium range 3D radar, used for situational awareness, gun control, helicopter control. Build into the mast for weather protection.
- Medium and Long range communication system.
- High power Ultra long range communication equipment
- Satellitt communication and internett. Both standard military satellitt and Tesla equipment, working on separate system, one is for military grade use, the other system is for normal hotel use.

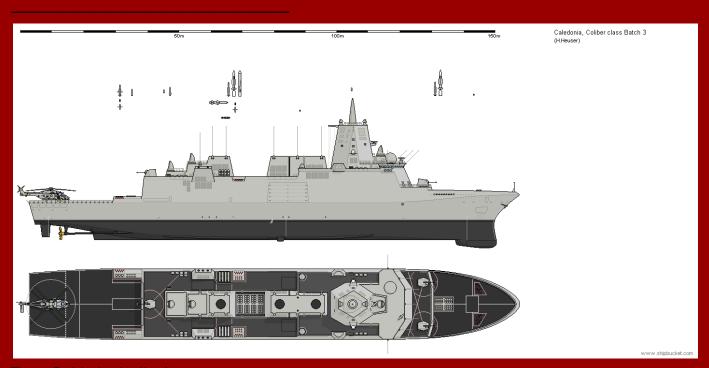
Armarment:

- Beffer 40mm (License build), stored under deck on a lift. A limited amount of ammunition stored in turret, but do have an extendable ammo lift.
- 2 x 12.7mm machine guns

Notes: Bollard pull: 160 tons

Deck equipment: towing winch, 325 ton breaking capacity.

Aviation facility: Hangar for medium helicopter, with aviation fuel and limited service facility. Equipped with various types of drones



Type: Guided missile destroyer

Batch 3

Displacement: 11000-12000 tons

Length: 154,83 meter Beam: 22,55 meters

Draught: 8,38 meters

Powerplant:

3 x Beffer GJC7600 72.000 shp

2 x 2000hp Diesel generators

6 x 4000 hp Diesel electric main engine

Speed: 32+ knots

Crew: 200, berthing space for 280

Armament

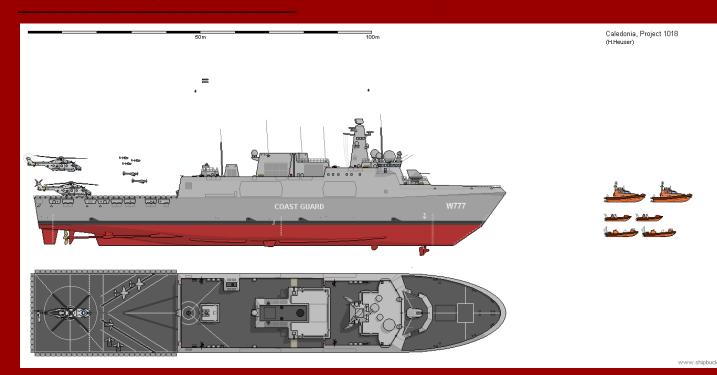
3 x 40mm Mk12 by Beffer tech.

1 x 32 cell Mk3 VLS by ABtech. for total of 48 VLS, capable to fire ESSM and standard missile family in addition to Caledonia Navy own missiles

1 x 64 cell Mk3 VLS by ABtech. for total of 48 VLS, capable to fire ESSM, Tomahawk and standard missile family in addition to Caledonia Navy own missiles

- Total 96 VLS Cells
- 4 x Quad launcher for NSM
- 2 x Mk15 CAM-launcher for guided rocket
- 4 x Mk34 MuDS, Multi defence system with ASW, ASuW and AAW capability
- 2 x twin 533mm torpedo launcher.
- 2 x Electronic weapon system

Aviation facility: Hangar for 2 medium helicopter. Helipad is heavy helicopter capable.



PT-6

Type: Offshore patrol vessel and transport

Displacement: estimated: 10.000 tons Length: 137,16 meters (450 feet) Beam: 23 meters (75.46 feet)

Draft: With sonar: 8,08 meters (26,5 feet)
Ice class: DNV GL: ICE-15AF (1.5 meter ice)

Power-plant and propulsion: CODLAG (can run the propulsion on single engine)

- 1 x GE LM2500+; 40.500 shp or Beffer ltd GJC7600; 48.000 shp (equipped with a generator, for when it energies as an emergency power station)

- 2 x Wärtsilä generator: 7.000 shp each

- 3 x Wärtsilä generator: 1500 shp each

- Ability to operate as powerplant for local community in emergencies

Speed: estimated: 27-29 knots

Crew: Cabins for 125, crew size under standard operation 50+ 20 aviation team.

Sensors:

- EADS TRS-3D 16 ES air/surface (200km range, gun fire support, tracking capacity 3D >750 targets)
- Phased illumination radar for gun and missile control.
- 2 main Navigation
- 2 light Navigation sensors
- 5+ communication dish
- Alle other standard coms systems!
- light sonar with some mine detection capability

Ready for

- additional illumination radar
- additional electronics
- Towed sonar (flex deck)

Armarment

- 1 x Bofors 56mm Mk3 (or equivalent from Caledonia Navy arsenal)
- 1 x AB tech. DV6-1. (in house developed, light weight and cheap, 5 barrel, remote controlled and partially automatic racket launcher) (firing: wire guided and heat seeking rocket, can fire other types as well)

Ready for:

- 1 x 35 or 40 mm cannon (over the helicopter deck)
- DV6-1 replaced by a bolt on deck NASAM-launcher)
- Mk41 32 cell VLS
- Torpedo (flex deck and hangar)

- Mines (flex deck)

Flex deck: Environment operations, towed equipment's, berthing/hospits, hospitals, cargo.

(ramp and small cargo elevator inside the (flex) hangar

Flex deck size: (Current design) 21meter x 63meter (1323m²)

Flight deck: (Current design) 42meter x 23 meter (966m²)

(flex) Hangar: (current design) 22meter x 23 meter (525mm²) (not taking account for for port

funnel and hallways/storage/workshop)

Aviation: 2 medium helicopters (NH90 or similar), various type of drones, up to 12 drones from

light to medium size



Type: Battlecruiser

Displacement: 27,000 tons standard; 32,000 tons full load

Length: 263.04 meter (863 feet)

Beam: Hull: 29,56 meter (97 feet); Flight deck: 38,40 meter (126 feet) (flight deck)

Draft: Hull: 8,83 meter (29 feet); Sonar: 14,02 meter (46 feet)

Propulsion: 2 X BC2N Reactors powering 2 propulsion turbines powering 2 electric motors and

2 small electric motors: 175,000 shp.

4 x Diesel generator mounted forward and aft, port and starboard. to increase the ships electricity production but also function as backup.

Speed: Officially in excess of 31 knots

Expected reactor life: 45 years

Complement: 800 life raft for up to 2500

Sensors and processing systems

Combat system

- HALIAR 1 Combats system
- DELAR Combat system (backup)

Radars¹

- ACX-Heavy Long range 3D radar (multi function, Search and target, illuminate) (officially can target more than 150+ targets)
- ACE-Light Short range 3D radar (Multi function, navigation, Search, flight deck control)
- SPS-50 2D (in a secondary role)
- Cf8 long Range Navigation radar
- 3 x of the shelf standard navigation radar
- 4 SPG-51 illumination (can carry 6) (in a secondary role, since ACX-Heavy can do the same work)
- Several Communications systems

Sonars:

- Type-3402-Havoc, Heavy sonar (active-passive) (extremely powerful, limited in operation during peace time, can kill divers that get to close!)
- Type- 2807-Screamer, light sonar (active-passive) (The sonar that is always in use)
- Towed cable sonar (length: classified: detection method: classified)
- Towed active sonar (of the shelf)

Electronic warfare and decoys

- 8 Decoy dispensers (400+ rockets)
- Nulka derivative

Armament

Missiles:

- 3 x Mk-26 GMLS mod 2 (firing, standard NATO missiles and ASRCO)
- 6+1 x Type-28 R-VLS twin Carousel (firing standard NATO-AAW missiles + Caledonia AAW missiles and ASuW missiles) (ASuW missiles from the inner carousel, since it's a full lenght)
- 8 x Type 4 R-VLS BLM carousel (firing tactical nuclear missiles and capital ASuW missiles with ballistic trajectory or direct)
- 6 x short in defense missile launcher

Guns

- 2 x 76mm Rapid-DP guns (water cooled/heated)

- 1 x Fast Forty/70 Type3 (mounted on the forward reactor compartment lid, can be easily removed, by removing some bolts and cables)
- 14 x C30 30-mm gatling gun (integrated into both of ships weapon system, can also be controlled remotely)
- a number of movable 12.7 HMG, mortar and rocket launcher

Torpedoes and others:

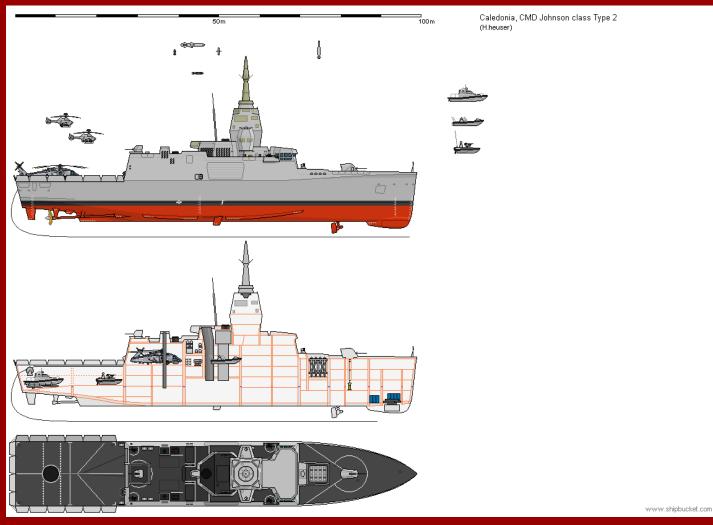
- 2 x twin light weight torpedo launcher (can fire electronic warfare torpedo)
- 2 x twin heavy weight torpedo launcher (can fire electronic warfare torpedo) (fire standard torpedo and ASW missile) (can fire nuclear warhead torpedo

Armor: 70-80mm plating around reactor, with Kevlar over vital areas. Composite armor protection over vital area including reactor area. Splinter protection. (reactor compartment can have it walls filled up with water or other type of fluid)

Aircraft carried: Normal: 2 heavy; 3 medium; 3 light helicopter. Flight deck and hangar build to handle Chinook or similar.

Flight deck can in an emergency handle VTOL aircraft, land and take of (for take off, aircraft must be as light as possible and capable to lift straight up!)

_



Type: Multi-mission guided corvette

CMD-2

Displacement: 3500t Length: 98.7m

Beam: 16m

Draught: 4,3-4,8m to keel (5,8-6,5m to bottom of sonar dome)

Material: Steel hull, composite structure with aluminium or carbon in various location, kevlar or

shrapnel protection over various areas.

Propulsion: CODI AG

Speed: max: 25+ knots; Cruise @ 16 knots

Endurance: 4000nm @ 16 knots

Crew: 50 to 65 (Gold crew and Blue crew, rotation); total: 130 + additional shore staff

Accommodation: 75 + 30 free berths

Radar: Phased Radars, coms, guidance, satellite,

Sonars: Hull mounted and towed passive and active sonar

Armament¹

1 x 56mm cannon

1 x 40mm cannon

4 x 12.7mm machine gun

2 x twin 324mm torpedo launcher

2 x quad NSM launcher

2 x 20 cell Guided rocket launcher

Mk48/56 VLS mod, with RIM-162 ESSM



Submarine

SR-66

Crew 98 + 12 men

Diving depth (operational) over 150 m Diving depth (maximum) over 300 m

Sea endurance 90 days
Dimensions and displacement

Length 97 m
Beam 10.7 m

Draught 10 m

Surfaced displacement 6 500 tons
Submerged displacement 7 200 tons

Propulsion and speed

Surfaced speed 15 ~ 20 knots

Submerged speed 29 knots

Nuclear reactors 2 x Rolls-Royce PWR2

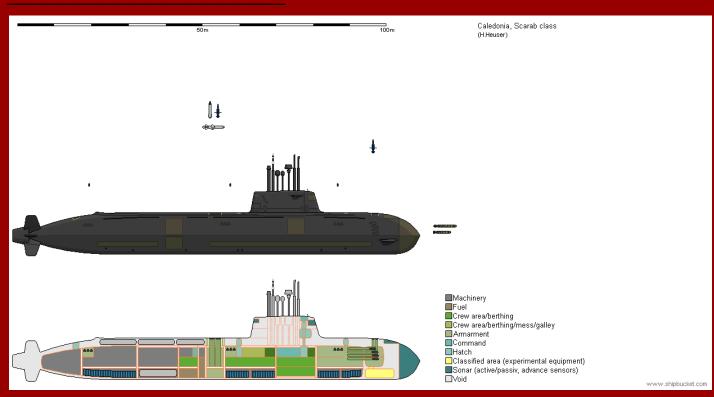
Steam turbines 1 x ?

Armament

Missiles Tomahawk cruise missiles; Harpoon anti-ship missiles in place of torpedoes

Torpedoes 6 x 533 mm bow tubes for 36 Spearfish torpedoes

Other mines in place of torpedoes



Scarb

Displacement: classified estimated: 8000+ tons

length: estimated to 110+ meter (illustration: 110.7 meter)

Beam: estimated to 9-10 meter depth: estimated to 8+ meter

Propulsion: speculated to be a Diesel-electric-fuel cell or nuclear

Speed: estimated: 18 knots surfaced, 20+- knots submerged (reported as above 26 knots)

Range: estimated: 8000 Nm

Endurance: 3 to 12 week (standard)

Test depth: classified, estimated over 250 metres (820 ft)

complement: from 45 to 75

Sensors and

processing systems:

- hull mounted active/passiv sonare, large
- hull mounted active/passiv sonare, small
- ice and mine sonal
- flank sonars
- environment sensors
- medium range 3D radar
- satellite and other Communications equipment

armament:

8 torpedo tubes, firing both heavy and light torpedo, probably both Mk-19 and Mk-32 torpedoes, can also fire missiles from the torpedo tubes.

Torpedo magazine holds up to 26 or more weapons (U978, are designed to hold up to 34 torpedos, but the U978 is an special operation submarine)

- 4 x light experimental VLS with reload, installed in one of the smaller pressure hull, in case of a failure
- 4 x large VLS aft for sail, with capability to quad pack or firing Sub-NSM or tactical nuclear missiles
- 6 x triple decoy launcher

Special equipment:

aft on the sail, a drone bay, that also can be used by special forces. this bay is always flooded, but can be pressurized in shallow water and access internal, but only when "shallow". an unspecified hull hanger for special/classified operation



Protector Ship

PX-87

Specifications

Displacement (Loaded):

- Standard: 14,600 metric tons - Full load: 18,988 metric tons

Length:

Overall: 200 metersWaterline: 195 meters

Beam: 30 meters

Draught

- Regular: 6.9 meters - Deep: 9.5 meters

Propulsion:

- 4 x propulsion systems
- Turboprop Electric Propulsion: 2 x 25,000 kW
- Power: 4 x 20 MW

Speed:

- Maximum: 47 knots- Cruising: 30 knots

Range: 18,500 nautical miles at 15 knots

Endurance: 90 days without resupplies

Complement: 1200 crew members

Armour:

- Belt: 400 mm - Deck: 160 mm - Turrets: 360 mm

Conning tower: 350 mm

Armament:

- 8 x Quad 60mm AA guns
- 2 x Anti-Aircraft Defense System 89-A
- 4 x Dual 40mm AA machine guns
- 16 x Quad 20mm AA cannons
- 48 x Cruise missile launchers
- 4 x ASW rocket launchers
- 16 x Torpedo tubes

Aircraft Carried

- 2 x Helicopters
- Drone Support: 10 x Anti-Aircraft Drones

Aviation facilities:

- Flight deck: 500 m²

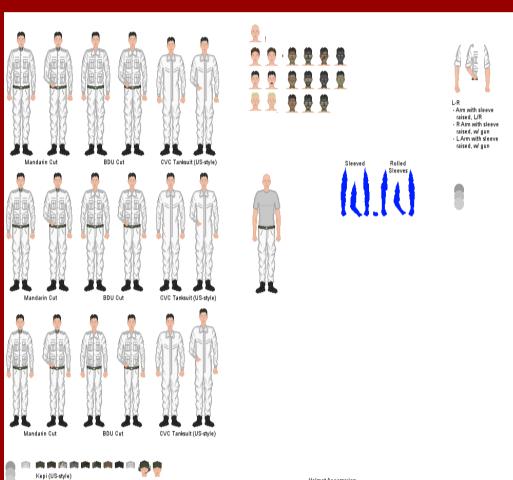
- Hangar: 400 m²

Electronic warfare & Decoys

- Radar & Sonar: Integrated Sensor System
- Electronic Warfare System: Combat System X7
- Decoy: 4 x CRAM Counter Rocket, Artillery, and Mortar system
- Countermeasures: 16 x Anti-Missile Laser Point Defense

Performance Parameters

- **Top Speed:**
- In ideal conditions: 47 knots
- **Operational Distance:**
- Without refueling: 18,500 nautical miles at 15 knots
- **Aerial Defense:**
- Drone prevention range: Up to 290 km
- Missile interception capability: Up to 360 km
- Air-to-air interception range: Up to 150 km
- Cannon range: Up to 30 km





- PASOT Helmet (Size Medium) Body Aimot, Fragmentation Protective Vest, Ground Troops (Size M) Body Aimot, Fragmentation Protective, Undergarment, Combat Vehicle Crewman's

- Sun-Wind-Dust Goggles:
 SWDG Clear Visor (Ballistic Protective)
 SWDG Laser Protective Visor (2 Wavelengths; Green)
 SWDG Laser Protective Visor (3 Wavelengths; Brown)

61988 1 2 2 2 2 2

Top - 1L Canteen - Box pouch - 5.56mm pouch (double, 20-rnd)

Bottom - 5.50mm pouch (double/single, 30-rnd) - Indv. First Ald Kit (IFAK) - 5.50mm pouch (20-rnd + grenade) - Entrenching tool pouch









PASGT Sizes L-R - XS, S, M, L





- IIFS Rifleman Vest
- Grenadier Vest Rflm Vest (Orthographic)



More Small Arms: More Small Arms: M60 machine gun (for M60E1 move bipod to gas tap) Ksp m/60 6.5x55mm machine gun (M60) Ksp m/86 5.5x45mm machine gun (Fiot. based on XM233) XM233 5.66x45mm machine gun

Orenades:
ACS8 HEAT Rifle Grenade
APAVAO HEDP Rifle Grenade
APAVAO HEDP Rifle Grenade
M34 WP WI Jaunch adapter
M47 Riot Control Grenade
M57 Fragmentation Grenade
M57 Fragmentation Grenade
M15 More Flare Grenade
M18 Smoke Flare Grenade
M19 Grenade
M19 Grenade
M19 Grenade
M14 Hosendiany Grenade
M04 WP Grenade
40mm M397A1 HE Grenade
40mm M69 Franade
40mm M61 Sarsiels Parachute
40mm M61 Sarsiels Smoke Marker
40mm M651 Tactical CS
40mm M1050 Thembadic
40mm M1112 Airbust (NL)



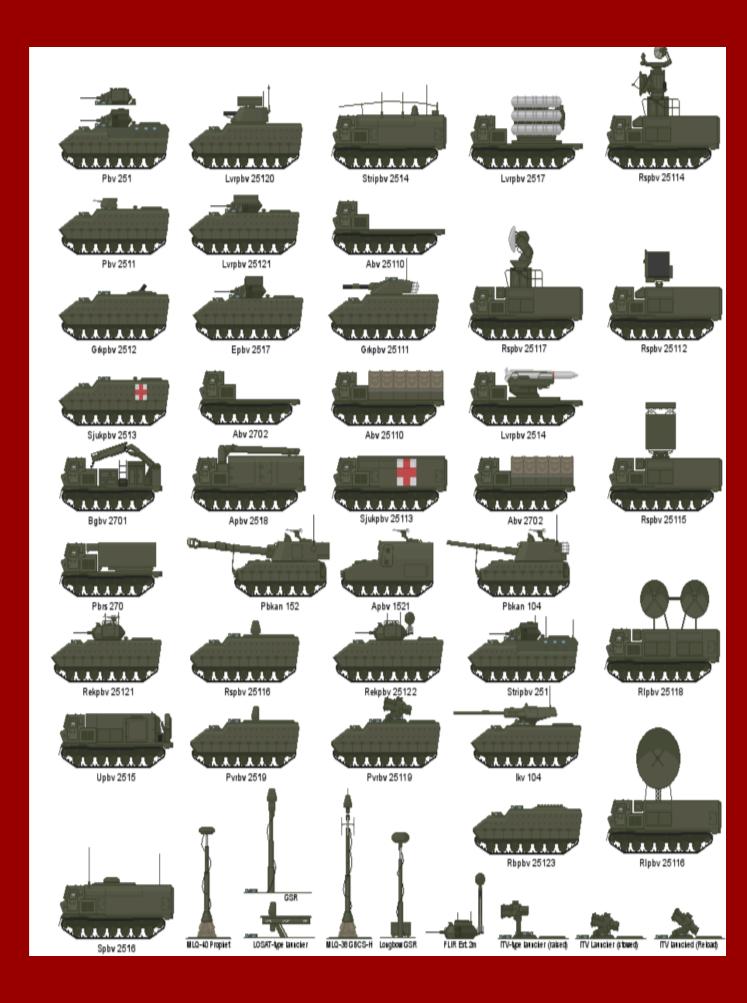








Attachments:
M60 (any; loaded)
XM233 (either; loaded)
M6 bayonet* scabbad
Browning Hf-Power
HP green, plastic pistol grip
Browning HF-Pomm magazine
Colt 4x20 optical sight
Colt 4x20 optical sight
Themal sight (fict based on PVS-2 + FELIN)
20, 30-, 45-round 5-56×45mm magazines (Alum)

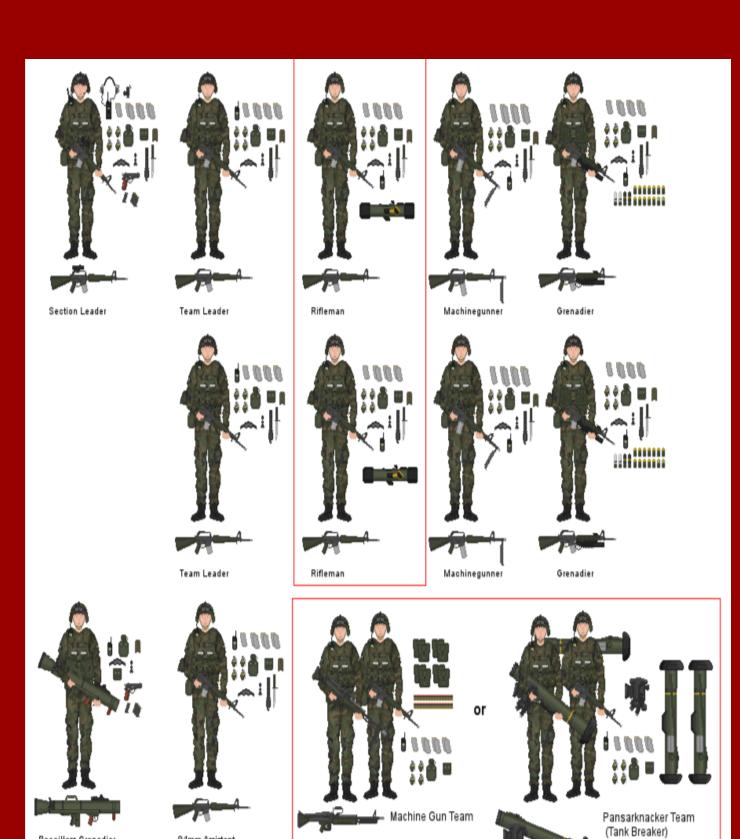


AIRBORNE INFANTRY PLATOON (1 O 52 E) Mortar Sqd Leader Platoon Sergeant Machinegunner Grenadier | Support Team First Fire/Maneuver Team Second Fire/Maneuver Team Machinegunner First Team Leader Rifleman Machinegunner Machinegunner Recoilless Grenadier Second Section Leader First Fire/Maneuver Team Support Team Second Fire/Maneuver Team LMG Assistant Recoilless Grenadier Third Section Leader Machinegunner First Team Leader First Fire/Maneuver Team Second Fire/Maneuver Team Support Team Fourth Section Leader

Third Anti-Armour Team

Second Anti-Armour Team

First Anti-Armour Team



Recoilless Grenadier

84mm Assistant

Short-Range

Battalion

RBS 96 (FIM-92)

- Four RBS 96 (FIM-92)
- One team carried in one carrier
- Eight missiles carried in fighting compartment - Cued by Type 94 radar



Regiment

Lvpbv 25120 (GE Blazer) - Four RBS 96 (FIM-92)

- One 1"/68 (GÀU-12/Á)

Lvrpbv 8003 (Chaparral)

- Four ready-to-fire RBS 80 (AIM-95)
- Eight RBS 80 stowed
- Cued by Type 94 radar





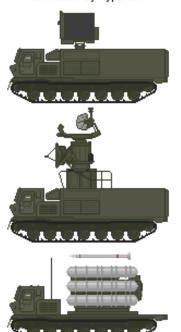


Medium-Range

Sep. Regiment

Lvrpbv 2517

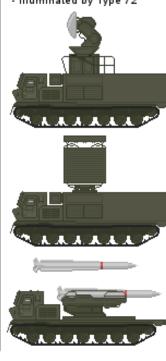
- Six ready-to-fire RBS 98 (SL-AAAM / AIM-152)
- Cued by Type 94 radar
- Illuminated by Type 65



Division

Lvrpbv 25114

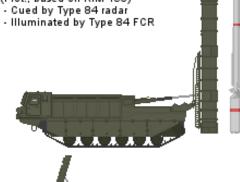
- Three ready-to-fire RBS 65 (Fict.; based on RIM-66)
- Cued by Type 87 radar
- Illuminated by Type 72



Long-Range

Corps

- <u>Lvrpbv 15114</u> Four ready-to-fire RBS 67 (Fict.; based on RIM-156)







Front

Heavy Expanded Mobility Tactical Truck (HEMTT) Family













Light Infantry Company (5 O 171 E)

Company Headquarters



OF-3 CMDR Ak58L OR-5 SR RTO Ak58

0F-2 X0 Ak58 0R-6 FWD SGL Ak58L OR-2 RATELO Ak58

Rifle Section (x9)

OR-8 COY SGT Ak58L OR-8 SUP SGT Ak58L OF-3 SUP SPT Ak58L

Platoon Headquarters (x3)



OR-2 RATELO Ak58 OR-7 PLT SGT Ak58 OR-4 PLT MED Ak58L



OR-6 SEC LDR Ak58



OR-6 SEC LDR Ak58

OR-4 ASTG Ak58L

OR-4 GRN Ak58/203 OR-3 FT AR Ksp60 OR-2 RFLM Ak58

OR-4 GRN Ak58/203 OR-3 FT AR Ksp60 OR-2 RFLM Ak58/Ksp58 OR-2 GRNR Grg48

Weapons Section (x3)



OR-6 SEC LDR Ak58

OR-5 MG TM LDR Ak58 OR-4 MG ASTG Ak58L OR-4 MG GNR Ksp58 OR-2 MG ASGT Ak58L



OR-5 MG TM LDR Ak58L OR-4 MG ASTG Ak58L OR-4 MG GNR Ksp58 OR-2 MG ASGT Ak58L



OR-5 AA TM LDR Ak58L OR-3 AA GNR Ak58L/CLU



OR-5 AA TM LDR Ak58L OR-3 AA GNR Ak58L/CLU

HVM Section



OR-6 SEC LDR Ak58 OR-4 HVM GNR Ak-58L



OR-5 HVM GNR Ak58L OR-4 VEH DVR Ak58



OR-5 HVM GNR Ak58L OR-4 VEH DVR Ak58

Mortar Section



OR-6 SEC LDR Ak58 OR-4 AST MTR Ak58 OR-4 MTR GNR P80/Grk77



OR-5 SQD LDR Ak58 OR-4 AST MTR Ak58 OR-4 MTR GNR P80/Grk77

Sniper Team



OR-7 TM LDR Ak55/Ag90 OR-6 SNPR Ak55/Ag90 OR-6 SNPR Ak58

Medical Evacuation Team



OR-6 SNR SPC Ak58L OR-4 MED SPC Ak58L OR-2 VEH DVR Ak58

Equipment List:

Carbine, 5.56mm, Ak58L	32
Command/Launch Unit (Armor Breaker).	6
Launcher, Grenade 40mm, m/203	18
Launcher, Rocket 66mm, m/66	3
Launcher, Rocket 84mm, Disposable, m/	9012
Machine Gun, 5.56mm, Ksp m/60	18
Machine Gun, 6.5mm, Ksp m/58	15
Missile, Hypervelocity (Tank Breaker)	3
Mortar, 60mm, m/77	2
Pistol, Automatic, 9mm, m/36	5
Pistol, Automatic, 9mm, m/80	11
Rifle, 25mm, Ag90T	3
Rifle, 12.7mm, Ag90L	
Rifle, 6.5mm, Psg55	3
Rifle, 5.56mm, Ak58	
Rifle, Recoilless 84mm, Grg m/48	9

Trailer, High Mobility4
Trailer, 2 1/2-ton, Cargo1
Trailer, Water, 1800L1
Truck, 1 1/4-ton, Ambulance1
Truck, 1 1/4-ton, Cargo11
Truck, 1 1/4-ton, Missile Carrier6
Truck, 1 1/4-ton, Section Carrier20
Truck, 1 1/4-ton, Tank Breaker3
Truck, 2 1/2-ton, Cargo1
Truck, 5-ton, Cargo1

Light Medium Tactical Vehicle (LMTV) Family



Family of Medium Tactical Vehicles (FMTV) 5-ton



M113 Family









M577





M1158



M1158 w/Volcano



M1158



M1158 (Chaparral)



M1158 (Chaparral)







M548 w/Volcano





M548



M720 (Chaparral)

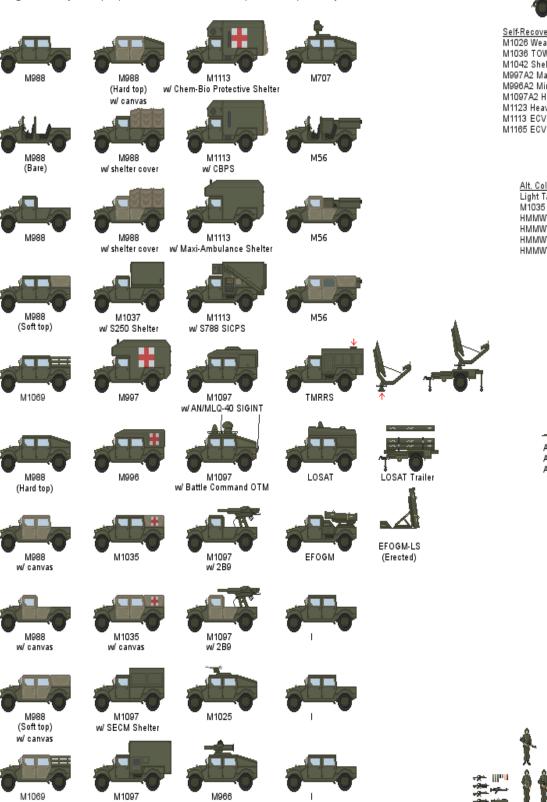


M720 (Chaparral)



M696

High Mobility Multipurpose Wheeled Vehicle (HMMWV) Family



w/canvas

w/ S788 Shelter



Self-Recovery Winch for M1026 Weapons Carrier M1036 TOW Carrier M1042 Shelter Carrier M997A2 Maxi-Ambulance M996A2 Mini-Ambulance M1097A2 Heavy HMMWV







<u>Alt. Colour Canvas for</u> Light Tactical Trailer M1035 Ambulance HMMWV Shelter Cover HMMWV Soft Top HMMWV Side HMMWV Both Doors







AN/MLQ-40(V)2 AN/MLQ-40(V)3 AN/MLQ-40(V)4 Masts









Vippekopter 14 / Vpk 14 - Fogde Machine Company (FMC) "Springare"

- Medium-lift Tiltrotor Brigades Type 08L, Type 12L, and Corps Type 21 and Type 98 Army Strike Force and Regular Army units





Vippekopter 16 / Vpk 16 - Fogde Machine Company (FMC) "Lopare"

- Heavy-lift Tiltrotor
 Brigades Type 08L, Type 12L, and Corps Type 21 and Type 98
 Army Strike Force and Regular Army units







